PACE Land data Users' Group

Building capacity and community for PACE's advanced terrestrial observations

WELCOME! Meeting starts at 2pm EST, USA (-5:00 UTC)

Agenda: **January 22 2026**

1) **PACE Mission & Applications Updates,** Morgaine McKibben (NASA GSFC/SSAI)

2) **Fall Foliage through the Eyes of PACE,** Fred Huemmrich (University of Maryland, Baltimore County)

3) **From Hyperspectral Indices to Global Fluorescence: PACE Vegetation Indices as Predictors of Terrestrial Photosynthesis,** Caleb Harmon (Virginia Tech)

PACE Land data Users' Group: Winter 2026

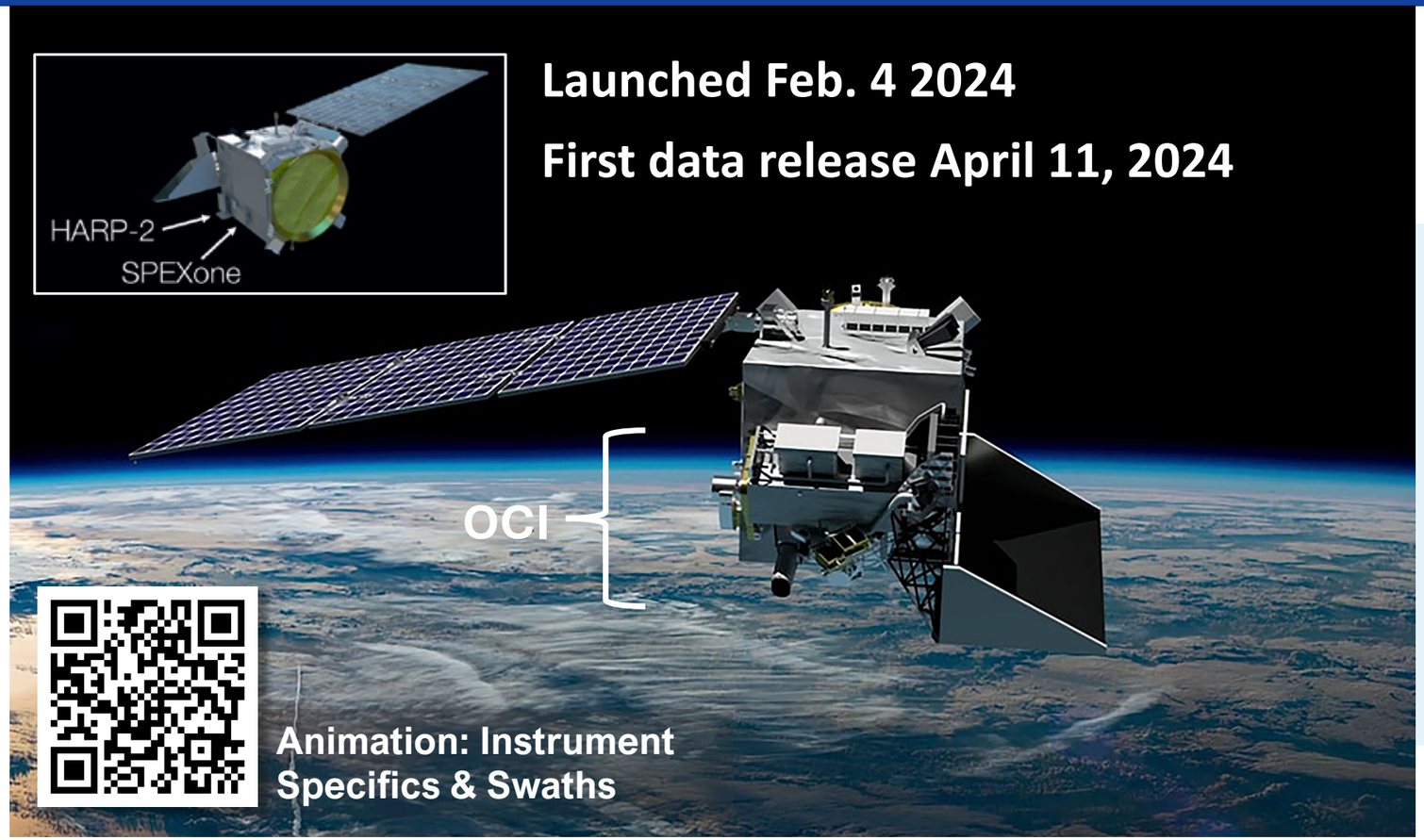
Morgaine McKibben, PhD
PACE Applications Lead
NASA Goddard Space Flight Center / SSAI

January 22nd, 2026

PACE Mission & Terrestrial Products

Brief review on PACE mission & updates on terrestrial product offerings

Review: Plankton Aerosol Cloud ocean Ecosystem (PACE) Observatory



Watch our first meeting for mission details:
https://pace.oceansciences.org/event_archive/landDataUserGroup.htm

- Polar orbiting, 13:00 local equatorial crossing time
- OCI: ~1.2 km^2 spatial resolution
- OCI: 1-2 day revisit, global coverage
- Data products free to all

3 instruments aboard:

- OCI: Hyperspectral radiometer (UV-VIS-NIR @5nm; 7 SWIR)
- HARP-2: hyperangular/multi-spectral polarimeter
- SPEXone: multi-angular/hyperspectral polarimeter

PACE is advancing & extending ocean biological, ecological, and biogeochemical data records, as well as cloud, aerosol, [and terrestrial!] data records.

Review: Provisional Terrestrial Products from PACE-OCI

PACE provides advanced, hyperspectral-enabled products AND heritage products for land, atmosphere, and oceans.

PACE Land data Users' Group focuses on terrestrial data products below from PACE-OCI
(land-relevant polarimeter products in future as they become available)

NEW, hyperspectral-enabled, only from PACE

- Surface Reflectance (122 bands)
- Photochemical reflectance index (PRI)
- Chlorophyll Index Red Edge (CIRE)
- Carotenoid Content Index (Car)
- Modified Anthocyanin Reflectance Index (mARI)

HERITAGE Terrestrial Indices:

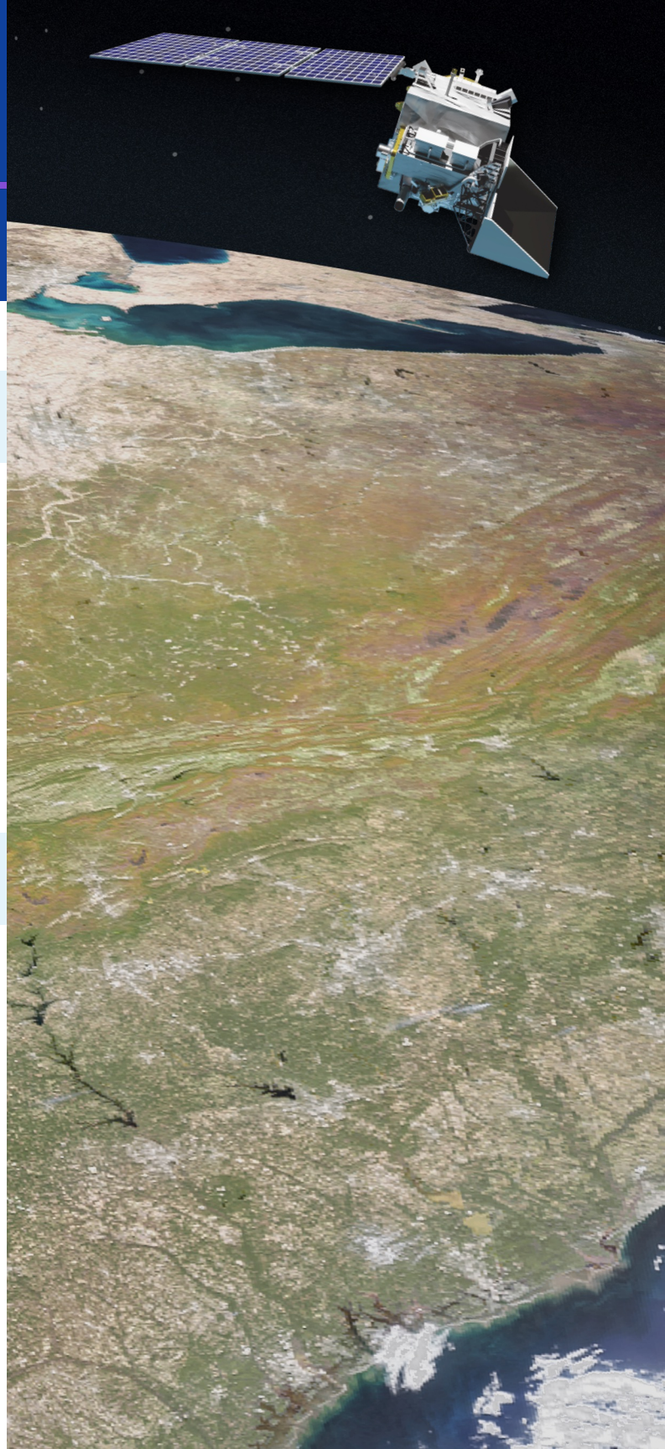
- Normalized Difference Vegetation Index (NDVI)
- Normalized Difference Water Index (NDWI)
- Normalized Difference Infrared Index (NDII)
- Normalized Difference Snow Index (NDSI)
- Enhanced vegetation index (EVI)
- Chlorophyll-Carotenoid Index (CCI)

Full descriptions of products: https://pace.oceansciences.org/data_table.htm#category4

Review our first meeting for data details: https://pace.oceansciences.org/event_archive/landDataUserGroup.htm

PACE Land data Users' Group (PLUG)

Building knowledge & capacity for PACE's advanced terrestrial data products



How do I join?

Subscribe to the PLUG mailing list (light on email traffic)

- Email pace-land-community-request@lists.nasa.gov, with "subscribe" in the subject
- Confirm your email address when prompted. Welcome email = success!

How do I participate?

YOU help determine PLUG meeting content.

- **Attend our quarterly meetings.** Bring your questions!
- Email us if you would like to present!
- **Respond to short, post-meeting surveys.** Your input guides meeting content.

Check out our previous two meetings:
https://pace.oceansciences.org/event_archive/index.htm

Join us: PACE Applications Partners/Early Adopters

Seeking *terrestrial* Applications Partners!

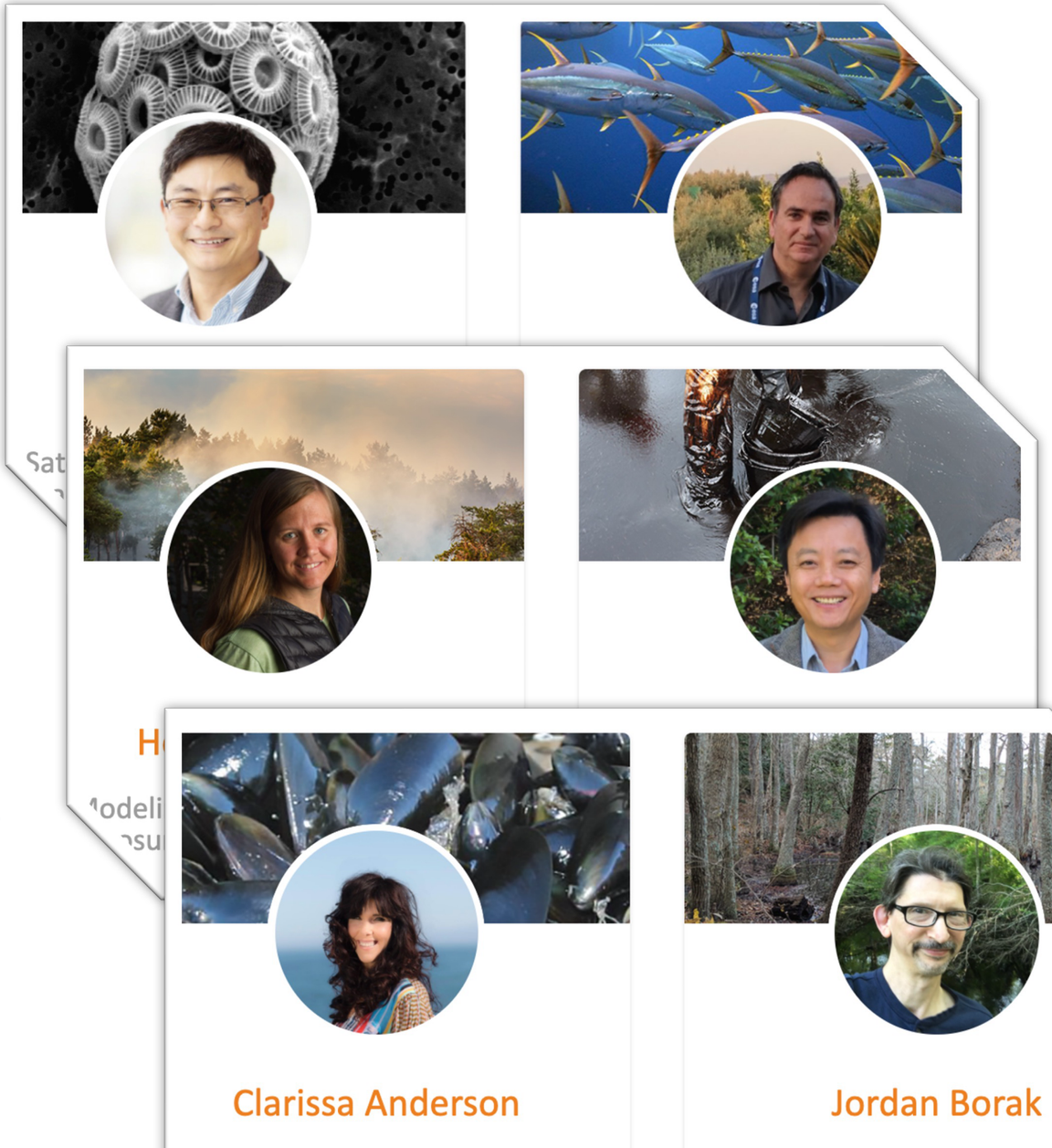
- **PACE Applications works with individuals and groups across public, private, non-profit, university, etc. sectors** who are looking integrate PACE data into applied science, decision-making, policy, research, business, resource management and more.

- **Partnerships specifically amplify applied research and development efforts** to foster and accelerate the translation of PACE observations into action

← Learn more, see examples of Applications Partners, and consider APPLYING!!

https://pace.oceansciences.org/app_adopters.htm

Questions? morgaine.mckibben@nasa.gov



PACE Mission & Applications Updates

Key changes and updates since our last meeting

PACE Data Updates (since summer 2025 PLUG meeting)

Please review our first meeting if you are not familiar with our data levels & versions:
https://pace.oceansciences.org/event_archive/landDataUserGroup.htm

Current data version:

Now: Version 3.1, full mission (March 2024-present)

You asked, we listened!

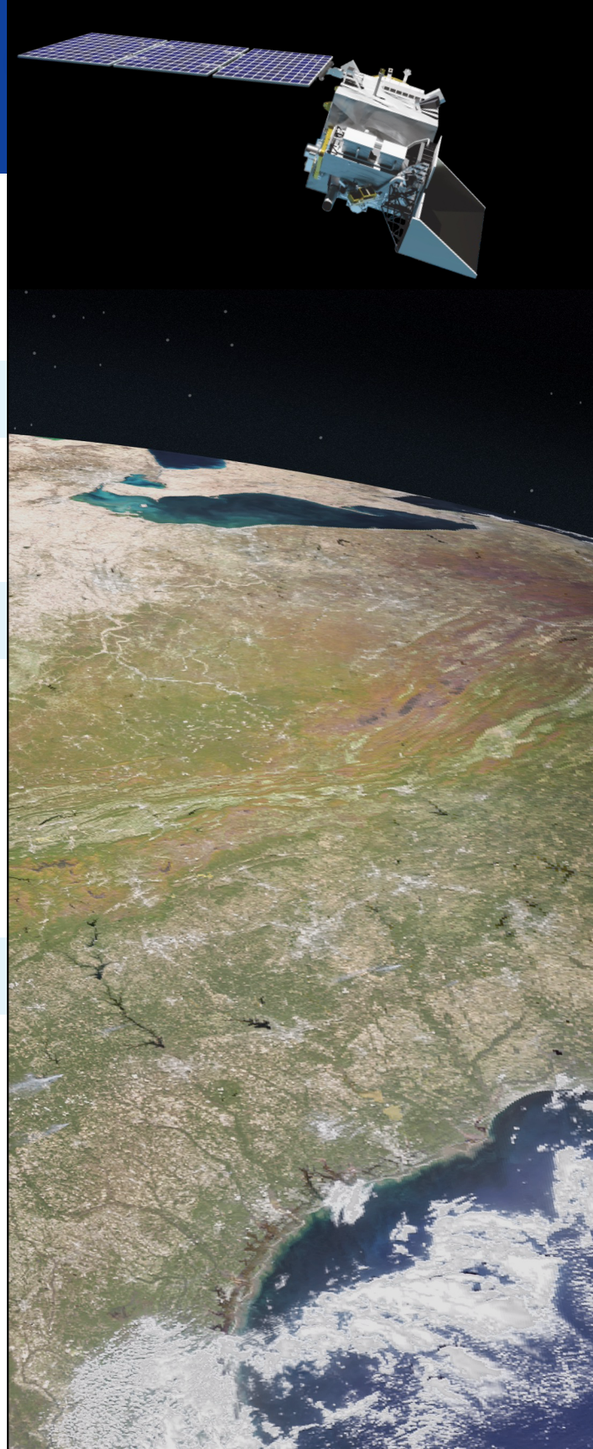
Level 3 mapped land data products now available at 2km; previously highest Level 3 spatial resolution was 4km

- **Now: Full-mission coverage (March 2024-Present)**

Coming soon: Nitrogen Dioxide (NO_2, Vertical Column Density)

- PACE NO_2 product has ~2 km spatial resolution with near-daily revisit. Ozone (O_3, VCD) also provided. Release will be announced via group email.
- Broad applications: Fire, Air Quality, Agriculture, etc

Presentation from PI with product details:
https://pace.oceansciences.org/event_archive/CoP_Quarterly_Telecon_2025.htm



nasa.github.io/oceandata-notebooks/home.html

Help Hub - Satellite data processing can be difficult. — OB.DAAC Help Hub

HELP HUB

Search ⌘ + K

Welcome

- Home
- Getting Started
- Help Hub Team

Help Hub Core

- Data Access and Processing Basics
  - Access Data Products
  - Intro to Product Levels
  - Orientation to Level-2
  - Orientation to Level-3
  - Projecting & GeoTIFFs
  - In situ Matchups
  - Machine Learning Tutorial
- Visualizations
  - PACE-HARP2
  - PACE-SPEXone
  - PACE-OCI Part I
  - PACE-OCI Part II

Help Hub - Satellite data processing can be difficult.

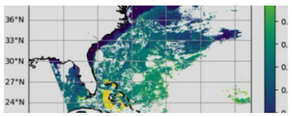
We're here to help you climb out of that hole!

This constantly updated collection of Jupyter notebooks is meant to help you get started accessing, visualizing, and analyzing OB.DAAC (Ocean Biology Distributed Archive Center) data products with Python. You can learn from these notebooks either by viewing the code and results on this webpage, or by downloading the notebook files by using the download button in the upper right and selecting .ipynb, and running them with JupyterLab. If you plan to run any of these notebooks but don't know how to start, please continue to the next section for information about the Earthdata Cloud and environments in Python. If you are familiar with running our notebooks, feel free to explore the Help Hub's different sections:

Help Hub Core

Explore these themes to get essential skills to access, process and visualize data.

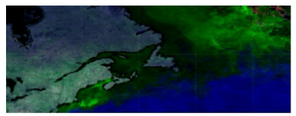
Data Basics



Learn fundamentals of accessing and processing data products.

Learn More →

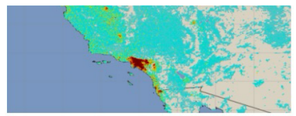
Visualizations



Find out how to make visualizations with data from various instruments

Learn More →

Cloud & Atmosphere



Explore atmospheric and cloud data products including aerosol retrievals and trace gases.

Learn More →

Land Surface

Ocean

PACE OCEAN COLOR OB.DAAC | OBPG NASA

Help Hub has a new look! This resource helps you learn about satellite data processing, including many PACE mission tutorials.

The Help Hub groups together our very best training materials and is constantly improving -- keep checking back for more!

https://nasa.github.io/oceandata-notebooks/

PACE Applications Updates

PACE Community of Practice

Mission Updates • Events • Mailing List • Newsletter

JOIN US. Open to all

← Sign up for the PACE Community Email List!
https://pace.oceansciences.org/pace_listserv.htm

Since last PLUG meeting: New email-based newsletter! →

- **Latest:** https://pace.oceansciences.org/newsletter/Fall2025.html
- https://pace.oceansciences.org/newsletter/Summer2025.html

Next week: PACE Community Quarterly Telecon

- Thursday January 29, 1pm-2pm EST/USA (UTC -5:00)
- Meeting link sent to list members next Wednesday
- **Polarimetric Aerosol & Cloud Products from PACE, part 2 of 2**
- Agenda: https://pace.oceansciences.org/events_more.htm?id=85

PACE Applications Updates: New GIS Imagery Services

Overview w/Storymaps, Living Atlas links:

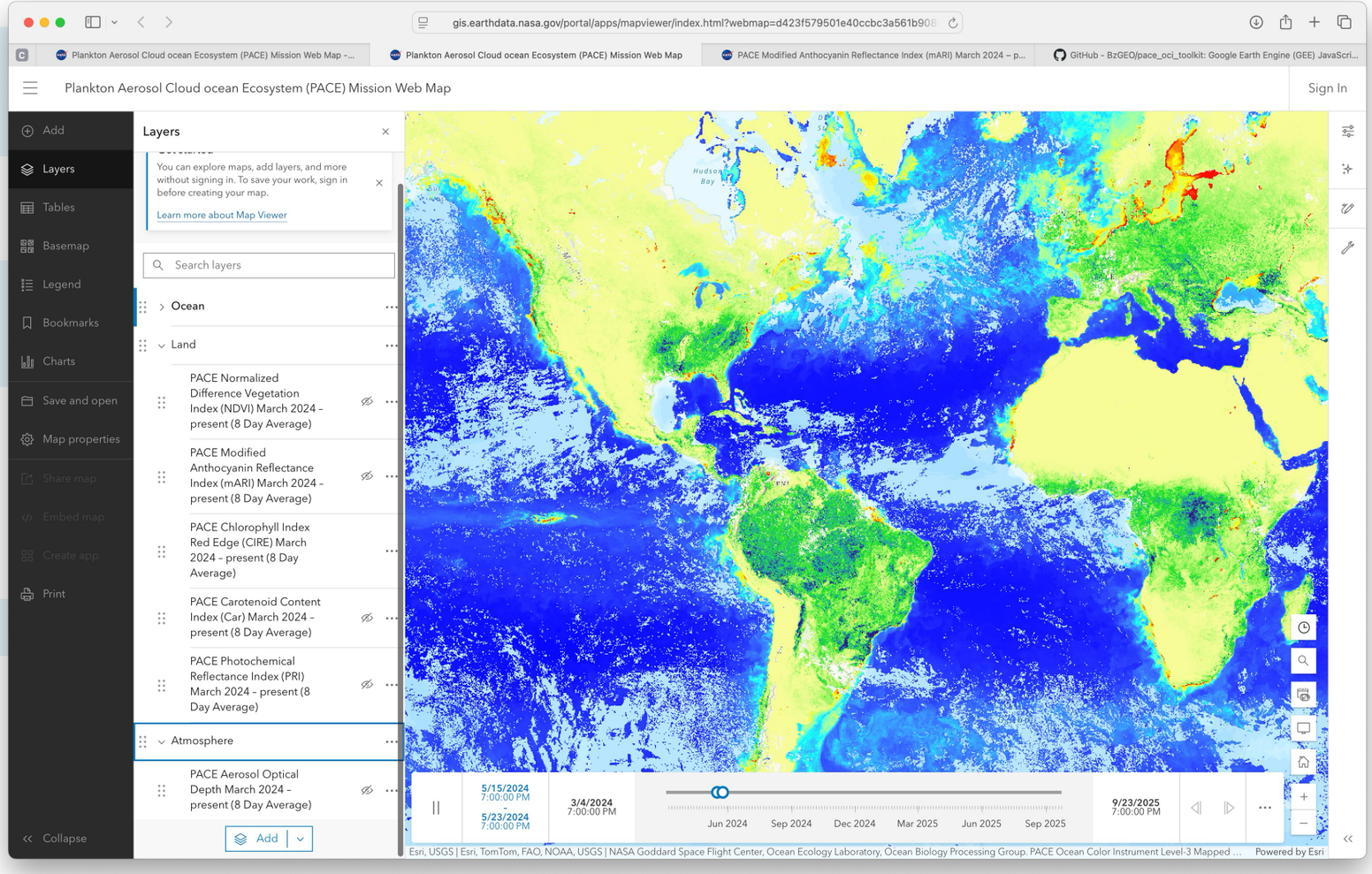
https://pace.oceansciences.org/blog.htm?id=35

List of New PACE NASA Earthdata GIS (EGIS) Services:

https://gis.earthdata.nasa.gov/portal/home/item.html?id=d423f579501e40ccbc3a561b908e6edc

Webmap of PACE's EGIS Services → →

https://gis.earthdata.nasa.gov/portal/apps/mapviewer/index.html?webmap=d423f579501e40ccbc3a561b908e6edc



VISIT US! February 11-12th 2026, Esri's FedGIS Conference, Washington DC: Workshop/Townhall Sessions

https://registration.esri.com/flow/esri/26fedgis/eventportal/page/detailed-agenda/session/1759243896609001ZwvS

PACE Applications Updates: ForestSAT 2026

ForestSAT 2026 Conference
May 4-8, Gainesville, FL (hybrid)

- https://carlos-alberto-silva.github.io/silvalab/ForestSAT2026/
- PACE Special Session (presentations/discussion)
- **Registration is open!**

ForestSAT Pre-Conference Workshop → →

- PACE Workshop on February 5th 2026, 9am-2pm EST/USA (-5:00 UTC),
- **Registration is open to all (small fee)!** Use QR code above or link below
- https://event.fourwaves.com/forestsatworkshopseries/pages

PACE

APPLICATIONS WORKSHOP

March 11th-12th 2026

Virtual Event

Event Info (registration opens soon):
https://pace.oceansciences.org/events_more.htm?id=84

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Please fill out our post-meeting survey!

Help inform future meetings & resources

https://forms.gle/P93uRHwvxeqGRX3Y9