



National Aeronautics
and
Space Administration

EARTHDATA

ILLUMINATING EARTH'S ENERGY BALANCE: ASDC'S ROLE IN ADVANCING PREFIRE'S INSIGHTS ON POLAR RADIATION

Hazem Mahmoud, Ph.D., ASDC DAAC Scientist-
ADNET

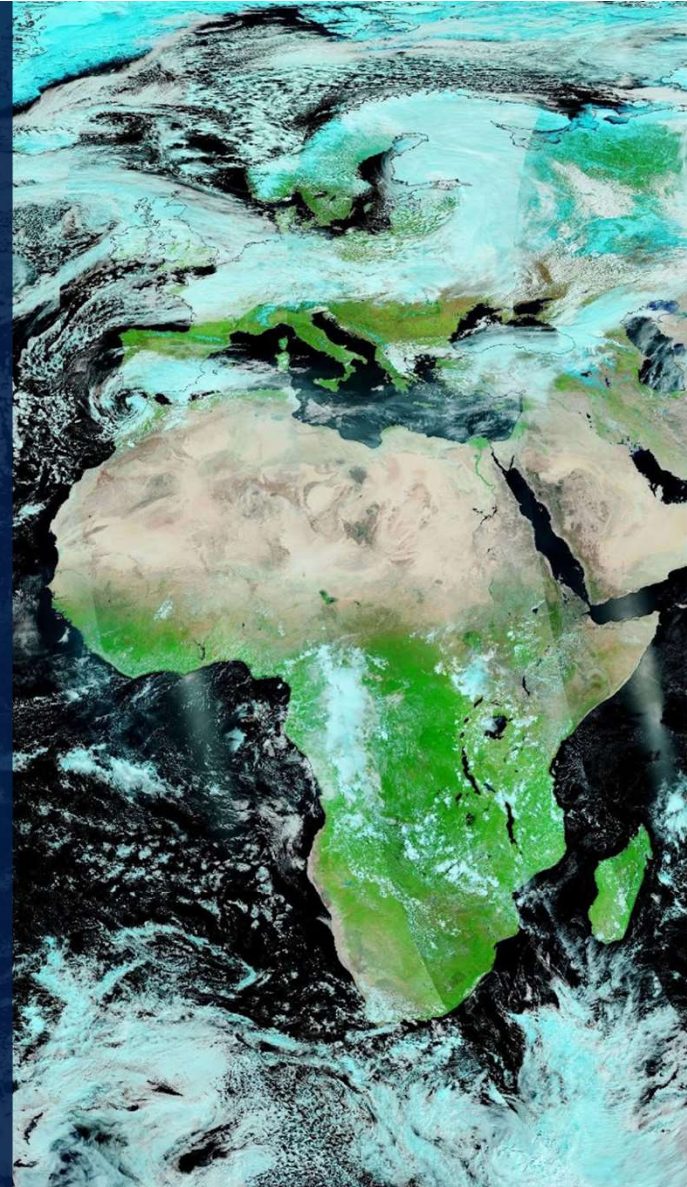
Brian Drouin, PhD., Deputy Principal Investigator and
Project Scientist for PREFIRE - JPL

Elizabeth Joyner, Outreach Lead - ADNET



Agenda

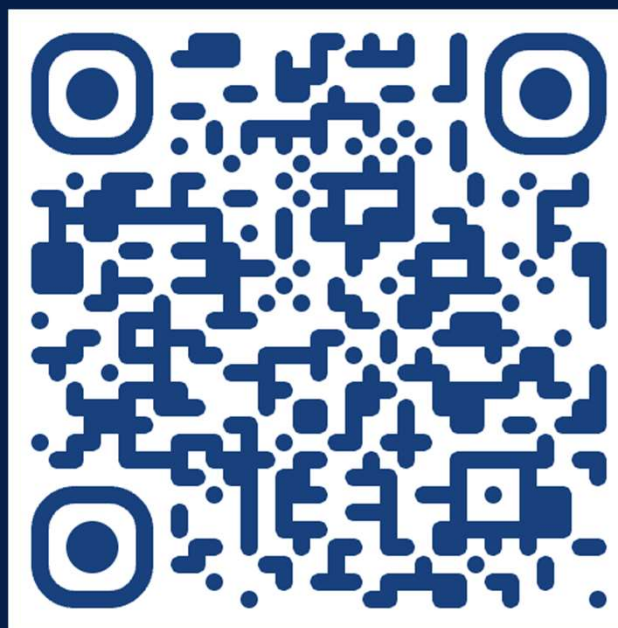
1. Webinar Resource Guide
2. Atmospheric Science Data Center Overview
3. PREFIRE Mission Background
4. PREFIRE Data Overview
5. PREFIRE Data in the Cloud
6. Tools and Services
7. PREFIRE Resources
8. Jupyter Notebook Demo
9. Q&A



Webinar Resource Guide:

zenodo

Navigate to the most updated version.

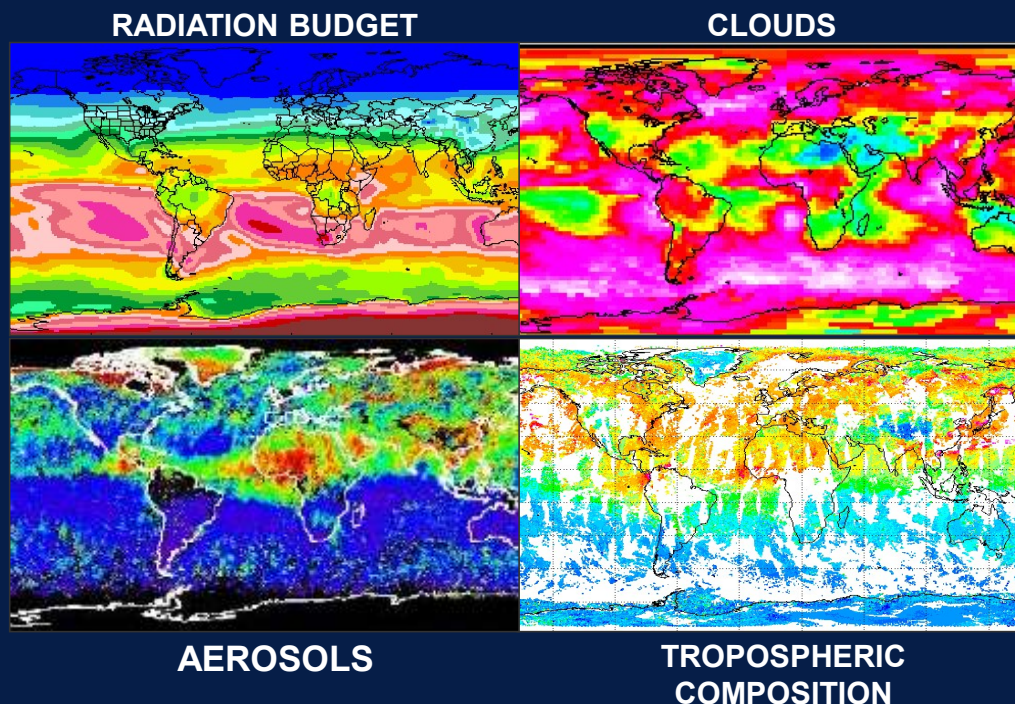


Earth Science Data and Information System *ESDIS*

NASA's Distributed Active Archive Centers (DAACs)

A federated approach to data management





ASDC at a glance

- ✓ 100+ Science projects
- ✓ 3000+ unique science products
- ✓ Data usage
- ✓ Data archive
 - +8 Petabytes
 - 168 million files (5,500 TB) on high-speed disks
- ✓ Data in cloud (ongoing)
 - Data and services in the cloud
 - Scalable infrastructure

Primary Functions of ASDC

Ingest
Archive
Distribute

Process
Engage & Support



A satellite view of Earth showing the Atlantic Ocean, Europe, and Africa. The top half of the image shows the North Atlantic and parts of North America and Europe. The bottom half shows the South Atlantic and parts of South America and Africa. A blue horizontal band is overlaid on the center of the image, containing text.

PREFIRE Mission Background

Brian Drouin, PhD
Deputy Principal Investigator and Project
Scientist for PREFIRE

A satellite-style map of the world is shown at the top and bottom of the slide. A large, semi-transparent blue rectangle covers the middle portion of the image. The text is overlaid on this blue area.

PREFIRE Data Overview


Hazem Mahmoud, Ph.D.

Featured Stories and Events

Lucy's Second Asteroid Flyby
APRIL 20TH, 2025



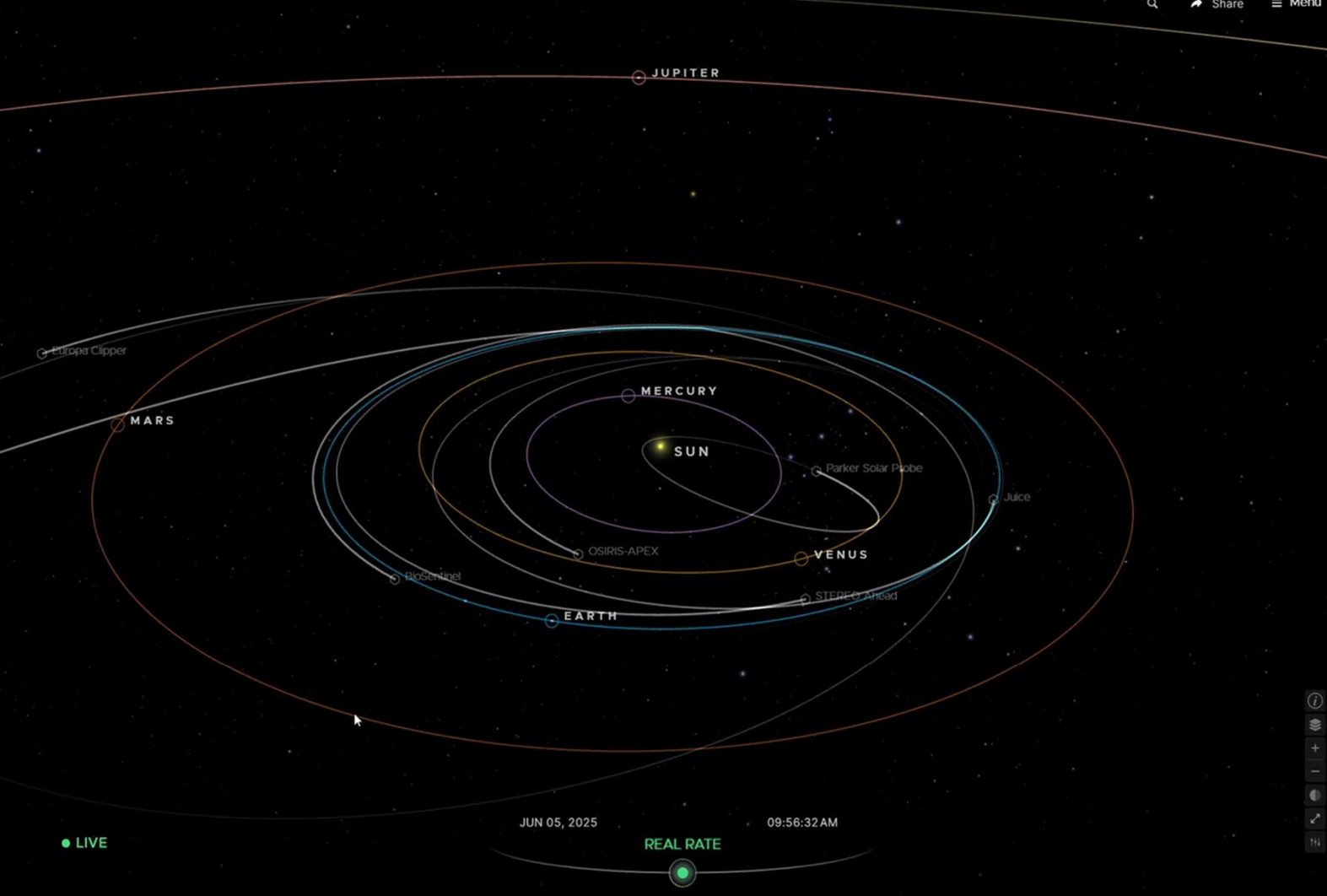
SPHEREx Launch
MISSION LAUNCH MARCH 11TH, 2025



Europa Clipper Mars Gravity Assist
MARS FLYBY ON MARCH 1ST, 2025



Parker Solar Probe Perihelion
CLOSEST APPROACH TO THE SUN

LIVE

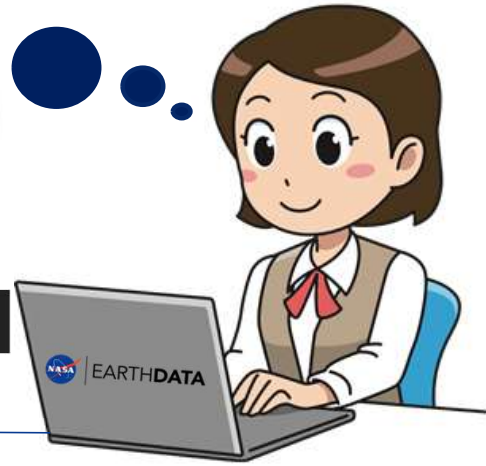
JUN 05, 2025

REAL RATE

09:56:32 AM

Information icons: Info, Home, Zoom in (+), Zoom out (-), Full screen, Refresh, and Help.

EJO



> 100 Gbps



+/- 30 Mbps



Amazon S3



Database



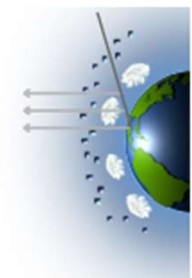
Application Services



Networking



Security



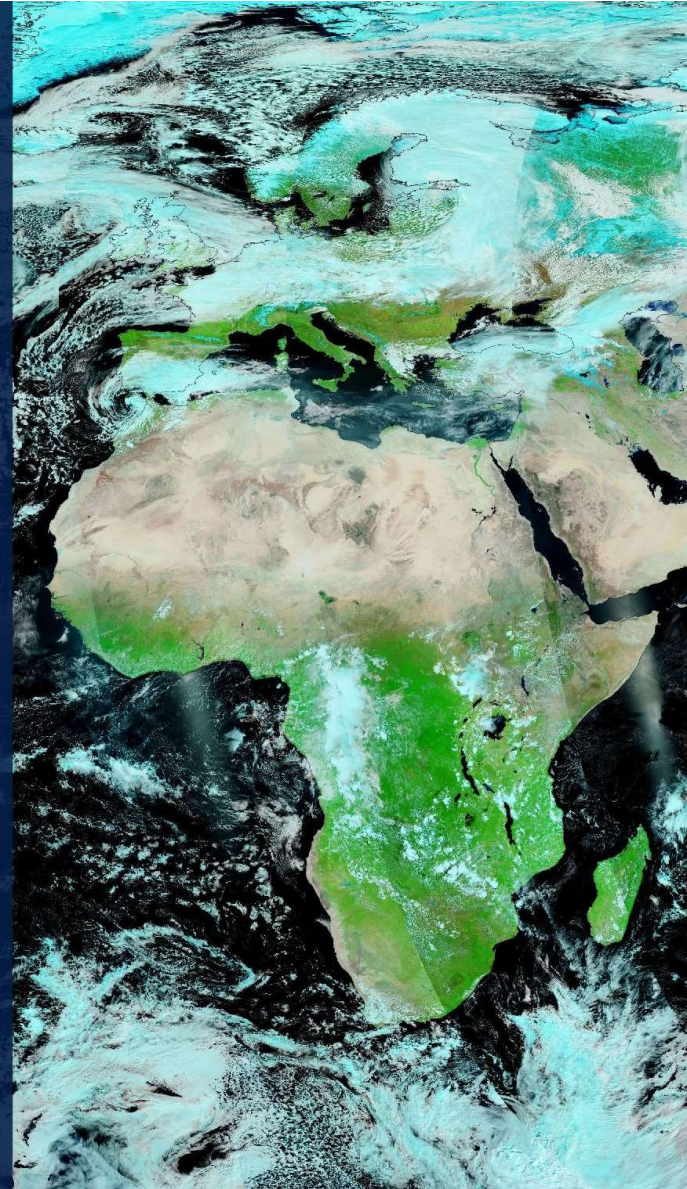
Atmospheric Science Data Center

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What Tools & Services Will We Use to Access PREFIRE Data?











Elizabeth



This guide highlights some of the data tools available for discovering, browsing, and accessing NASA Earth science data. By knowing common tasks the tools can accomplish, you'll have more time to process data and maximize scientific return.

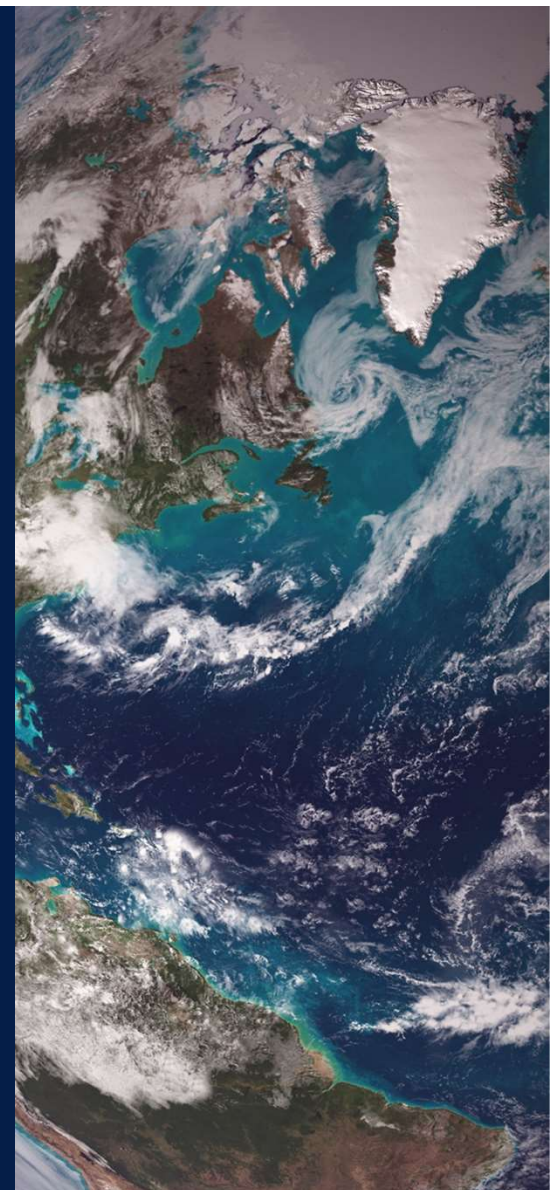
- KEY**
- User can achieve this task within this tool.
 - ◐ Task can be partially completed with this tool.
 - Task cannot be completed within this tool alone.

- TOPICS**
- Atmosphere
 - Biosphere
 - Climate Indicators
 - Cryosphere
 - Human Dimensions
 - Land Surface
 - Ocean
 - Solid Earth
 - Sun-Earth Interactions
 - Terrestrial Hydrosphere

	Worldview	Giovanni	Earthdata Search	CMR Search API	FIRMS	AppEEARS	VEDA Dashboard	OPeNDAP	EGIS	Panoply
DATA TASKS	Explore/Find Data	●	●	●	●	●	●	●	●	●
	Co-locate variables ¹	●	●	●	●	●	●	●	●	●
	Narrow Down/Subset Data → Subset Spatially for a Point	◐	●	●	●	◐	○	●	●	○
	Narrow Down/Subset Data → Subset Spatially for an Area	◐	●	●	●	◐	●	●	●	○
	Access/Get Data → Download data directly	◐	●	●	●	●	○	●	●	●
	Customize/Transform Data → Reformat data	○	●	●	●	●	◐	●	●	○
	Analyze Data → Analyze in-browser	●	●	○	○	●	○	○	●	○
	Analyze Data → Correlate variables	●	●	○	○	○	◐	○	●	○
	Analyze Data → Create time series	●	●	○	○	◐	●	○	●	●
	Analyze Data → Detect Change	●	●	○	○	◐	●	○	●	●
	Analyze/Visualize Data → Visualize primary variables	●	●	◐	○	●	○	○	●	●
	Application Programming Interface (API) available	●	○	○	●	●	●	●	●	○
	Download requires Earthdata Login	○	●	●	○	●	●	○	●	○
	GIS-Friendly Output/Integration	●	●	◐	○	●	●	○	●	◐
	Programming skills required	○	○	○	●	○	○	◐	○	○
	Includes entire NASA Earth science data archive	○	○	■	■	○	○	■	○	○
	Web-based <input type="checkbox"/> Local install <input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
🔍 Browse <input checked="" type="checkbox"/> Download ² <input checked="" type="checkbox"/>	🔍 <input checked="" type="checkbox"/>	🔍 <input checked="" type="checkbox"/>	🔍 <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	🔍 <input checked="" type="checkbox"/>	🔍 <input checked="" type="checkbox"/>	🔍 <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	🔍 <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<p>1. A variable is any of a set of physical properties whose values determine the characteristics or behavior of something. For example, variables of the atmosphere include temperature, pressure, and density.</p> <p>2. Download includes downloading subsets of data.</p>	<p>Earthdata Topic Areas</p> 									
										N/A

PREFIRE Data Distribution: Tools and Services

- Earthdata Search
- Harmony Services
- OPeNDAP
- Jupyter Notebooks
- GIS
- Earthdata Forum



PREFIRE Tools & Usability Services

Products	Orderability	Collection/Variable	Services
L0	Orderable	Basic Service AUX ORB TLM	Earthdata Search
L1	Basic Orderable	Standard	Earthdata Search (EDS) thumbnails
L2	Orderable Comprehensive Service	Collections <ul style="list-style-type: none"> PREFIRE_SATX_2B-SFC PREFIRE_SATX_2B-CLD PREFIRE_SATX_2B-FLX PREFIRE_SATX_2B-MSK PREFIRE_SATX_2B-ATM 	Visualization: <ul style="list-style-type: none"> EDS thumbnails Worldview-Outgoing Longwave Radiation (OLR) Subsetting: <ul style="list-style-type: none"> Harmony L2SS EJO Aggregation: <ul style="list-style-type: none"> Harmony CONCISE
L3	Orderable Standard Service	PREFIRE_SATX_3-SFC-SORTED <ul style="list-style-type: none"> Surface Emissivity 	Subsetting: <ul style="list-style-type: none"> HOSS Visualization: <ul style="list-style-type: none"> Thumbnails

Earthdata Login

Earthdata Login provides a simple, centralized mechanism for user registration and user profile management for all users accessing data.



Need a little help?

View Earthdata Login Tips
In Zenodo



Example Tools & Services



- [Earthdata Search](#) (enterprise-level)

- [Level 2 Subsetter](#)
- [Level 3 and 4 Regridder and Subsetter](#) (L34RS)
- [OPeNDAP](#)
- [Earthdata Search](#) (enterprise-level)

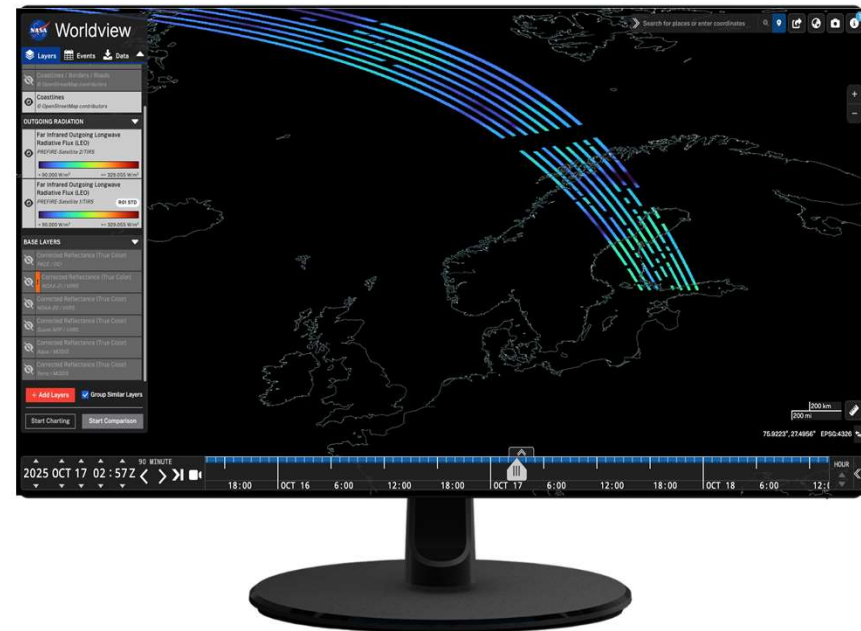
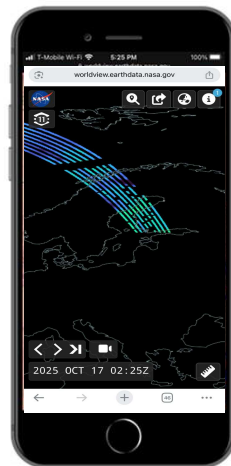
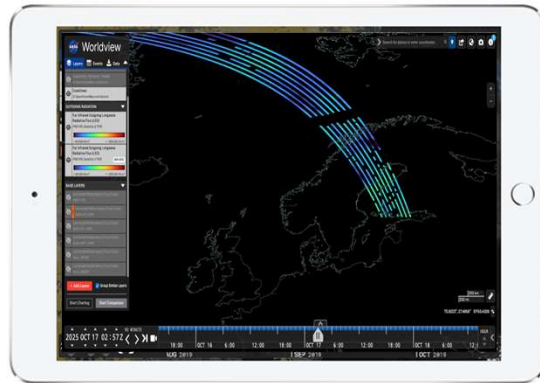
- [Giovanni](#)
- [ArcGIS Web Maps and Apps](#)
- [Worldview](#) (enterprise-level)

Viewing PREFIRE data in NASA Worldview

Hazem Mahmoud

NASA Imagery for Visualizers

- **Worldview** is an **open source** web mapping application
- **Global Imagery Browse Services (GIBS)** is a **set of services** - fast and open access to 1000+ NASA imagery products



NASA Worldview

Layers Events Data

REFERENCE

- Place Labels
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
- Coastlines / Borders / Roads
© OpenStreetMap contributors
- Coastlines
© OpenStreetMap contributors

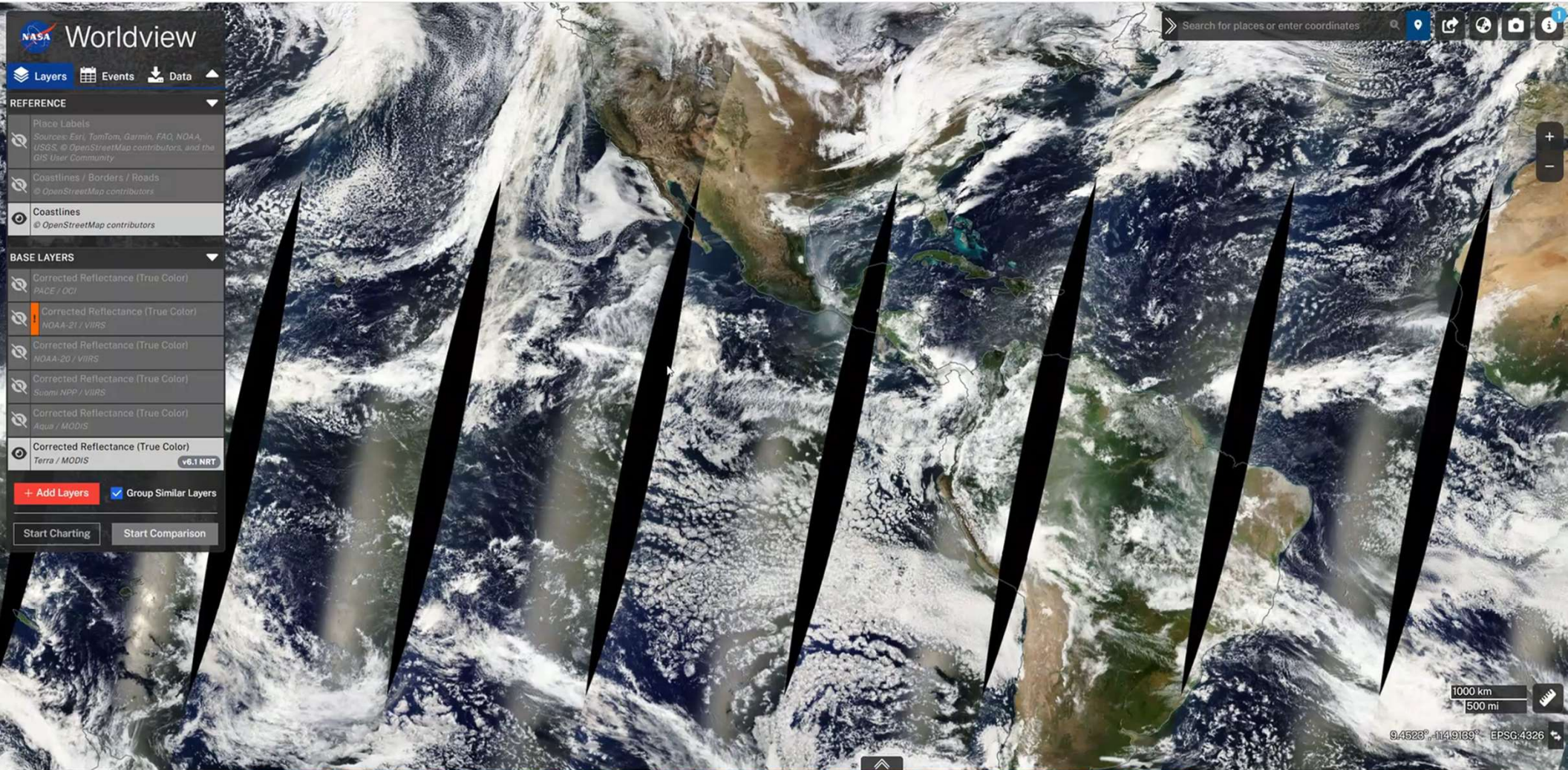
BASE LAYERS

- Corrected Reflectance (True Color)
PACE / OCI
- Corrected Reflectance (True Color)
NOAA-21 / VIIRS
- Corrected Reflectance (True Color)
NOAA-20 / VIIRS
- Corrected Reflectance (True Color)
Suomi NPP / VIIRS
- Corrected Reflectance (True Color)
Aqua / MODIS
- Corrected Reflectance (True Color)
Terra / MODIS **v6.1 NRT**

+ Add Layers Group Similar Layers

Start Charting Start Comparison

Search for places or enter coordinates



1000 km
500 mi

9.4523°, 114.9189° EPSG:4326

1 DAY

2025 NOV 09 < > ||

AUG 2025 SEP 2025 OCT 2025 NOV 2025

DAY

NASA Worldview

Layers Events Data

REFERENCE

- Place Labels
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, OpenStreetMap contributors, and the GIS User Community
- Coastlines / Borders / Roads
OpenStreetMap contributors
- Coastlines
OpenStreetMap contributors

OUTGOING RADIATION

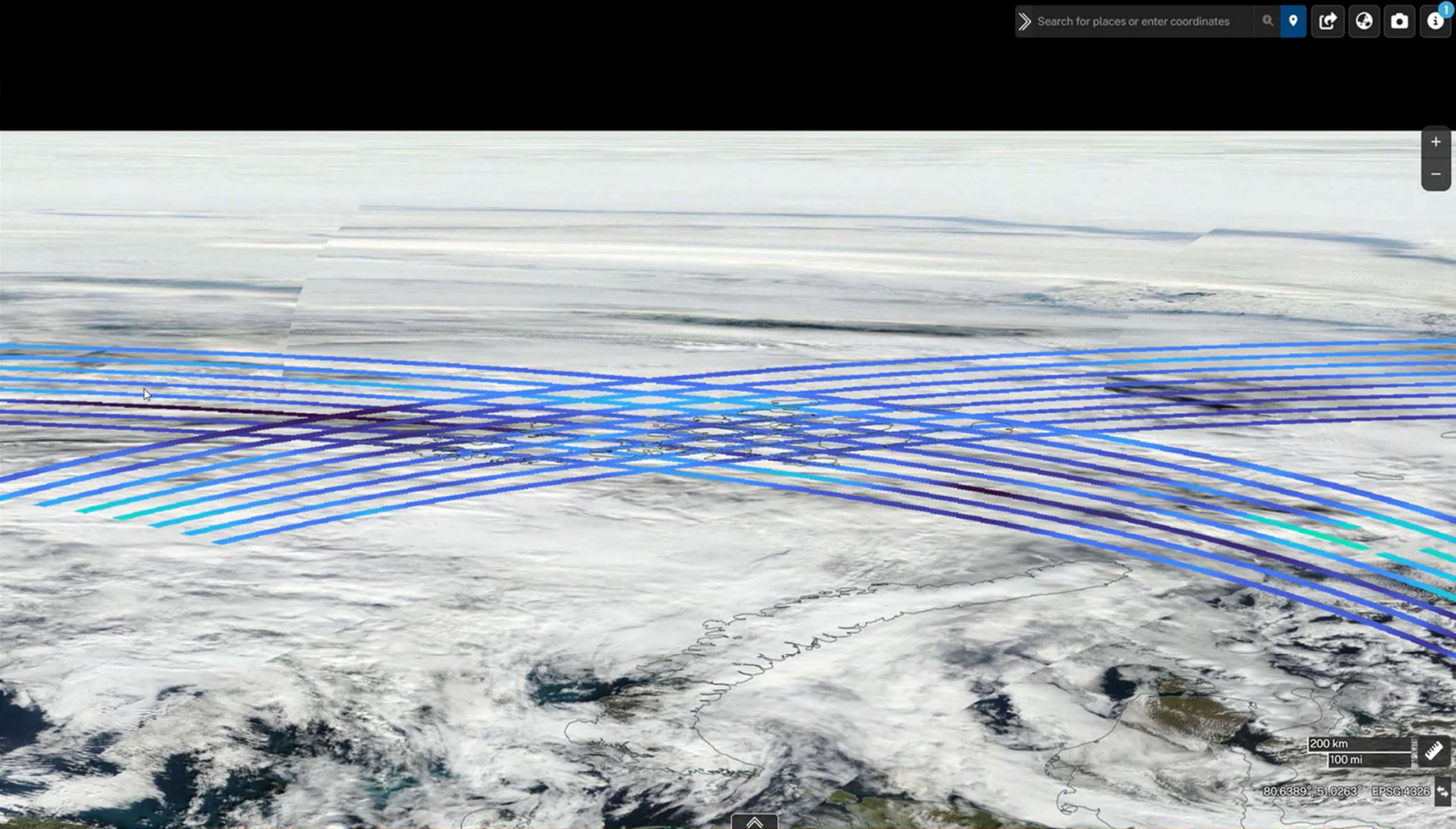
- Far Infrared Outgoing Longwave Radiative Flux (LEO)
PREFIRE-Satellite 2/TIRS
R01 STD
Color scale: < 90,000 W/m² to >= 329,055 W/m²
- Far Infrared Outgoing Longwave Radiative Flux (LEO)
PREFIRE-Satellite 1/TIRS
R01 STD
Color scale: < 90,000 W/m² to >= 329,055 W/m²

BASE LAYERS

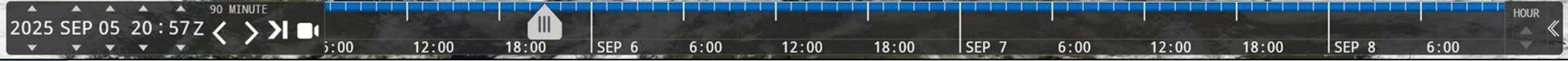
- Corrected Reflectance (True Color) PACE / OCI
- Corrected Reflectance (True Color) NOAA-21 / VIIRS
- Corrected Reflectance (True Color) NOAA-20 / VIIRS
- Corrected Reflectance (True Color) Suomi NPP / VIIRS
- Corrected Reflectance (True Color) Aqua / MODIS
- Corrected Reflectance (True Color) Terra / MODIS v6.1 STD

+ Add Layers Group Similar Layers

Start Charting Start Comparison



Search for places or enter coordinates



200 km
100 mi
80.6389° 51.0263° EPSG:4326

NASA Worldview

Map Layers

- Layers
- Events
- Data

REFERENCE

- Place Labels
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
- Coastlines / Borders / Roads
© OpenStreetMap contributors
- Coastlines
© OpenStreetMap contributors

OUTGOING RADIATION

- Far Infrared Outgoing Longwave Radiative Flux (LEO)
PREFIRE-Satellite 2/TIRS **R01 STD**

< 90,000 W/m² >= 329,055 W/m²
- Far Infrared Outgoing Longwave Radiative Flux (LEO)
PREFIRE-Satellite 1/TIRS **R01 STD**

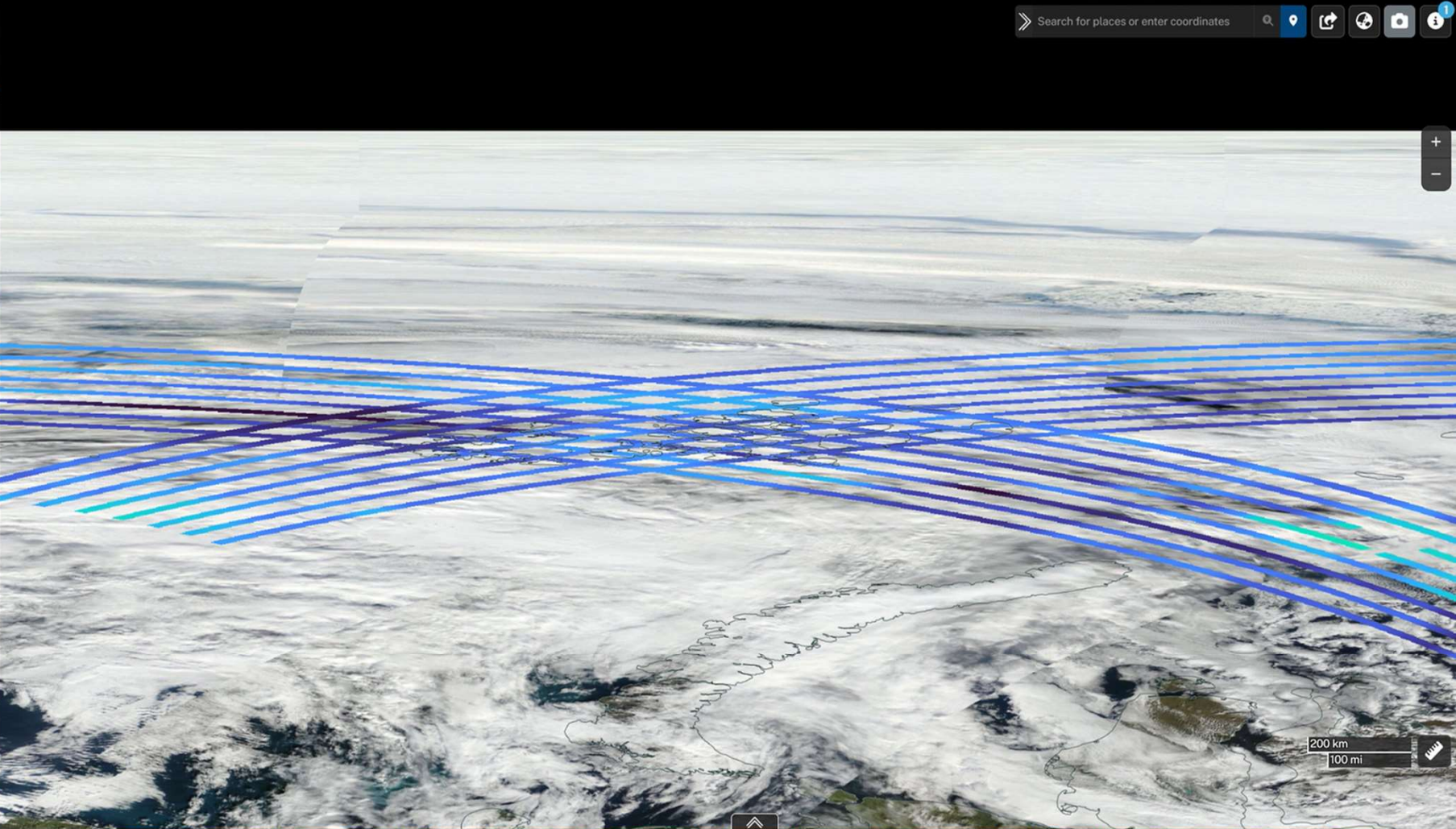
< 90,000 W/m² >= 329,055 W/m²

BASE LAYERS

- Corrected Reflectance (True Color)
PACE / OCI
- Corrected Reflectance (True Color)
NOAA-21 / VIIRS
- Corrected Reflectance (True Color)
NOAA-20 / VIIRS
- Corrected Reflectance (True Color)
Suomi NPP / VIIRS
- Corrected Reflectance (True Color)
Aqua / MODIS
- Corrected Reflectance (True Color)
Terra / MODIS **v6.1 STD**

[+ Add Layers](#) Group Similar Layers

[Start Charting](#) [Start Comparison](#)



2025 SEP 05 20:57Z < > 90 MINUTE

5:00 12:00 18:00 SEP 6 6:00 12:00 18:00 SEP 7 6:00 12:00 18:00 SEP 8 6:00 HOUR

200 km
100 mi

NASA Worldview

Layers Events Data

A: 2025 SEP 05 B: 2024 AUG 29

REFERENCE

- Place Labels
- Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
- Coastlines / Borders / Roads
- Coastlines

OUTGOING RADIATION

Far Infrared Outgoing Longwave Radiative Flux (LEO)
PREFIRE-Satellite 2/TIRS R01 STD

< 90,000 W/m² >= 329,055 W/m²

Far Infrared Outgoing Longwave Radiative Flux (LEO)
PREFIRE-Satellite 1/TIRS R01 STD

< 90,000 W/m² >= 329,055 W/m²

BASE LAYERS

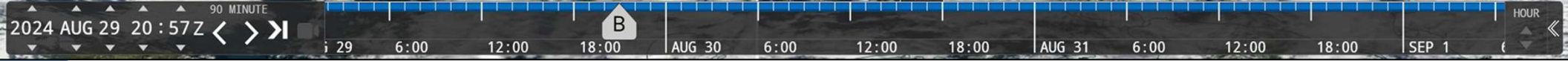
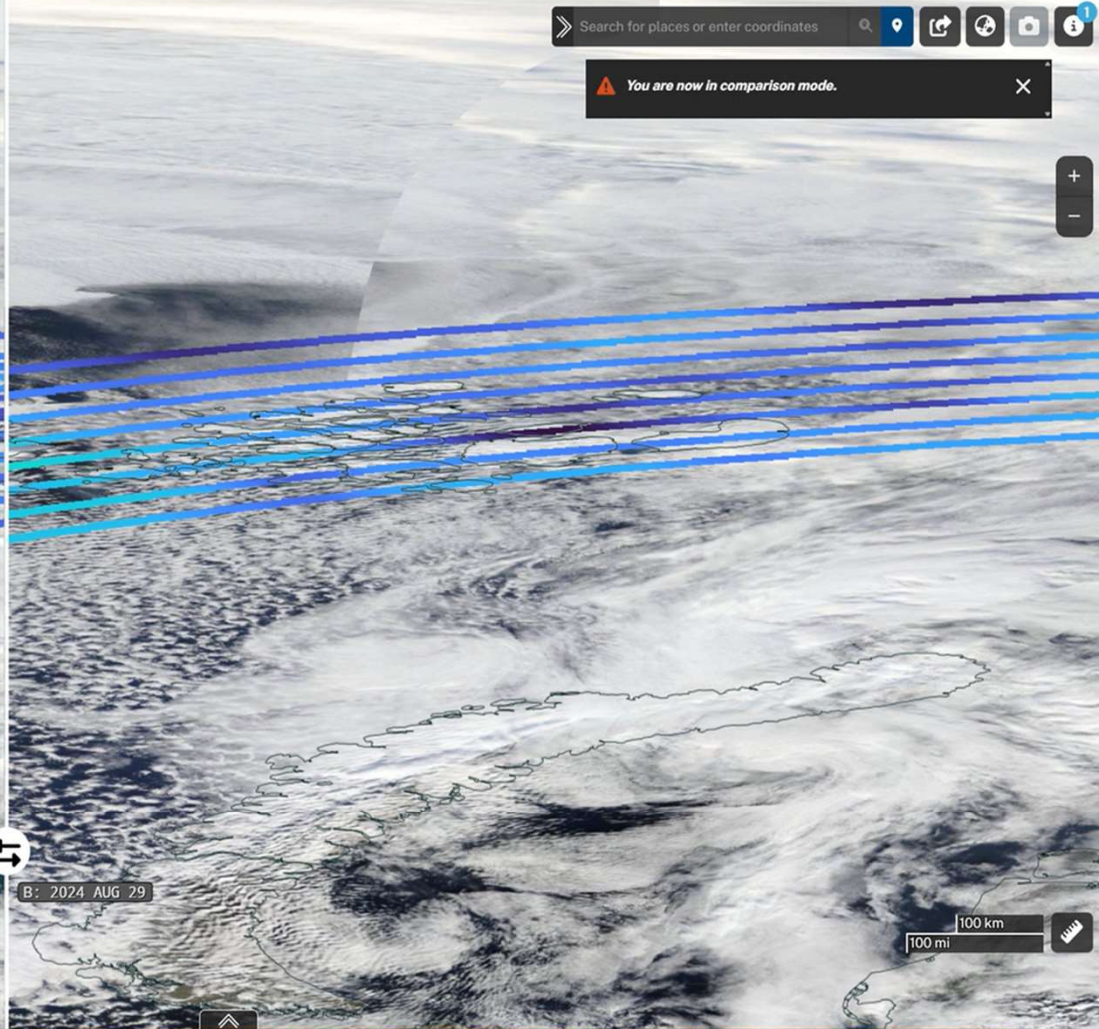
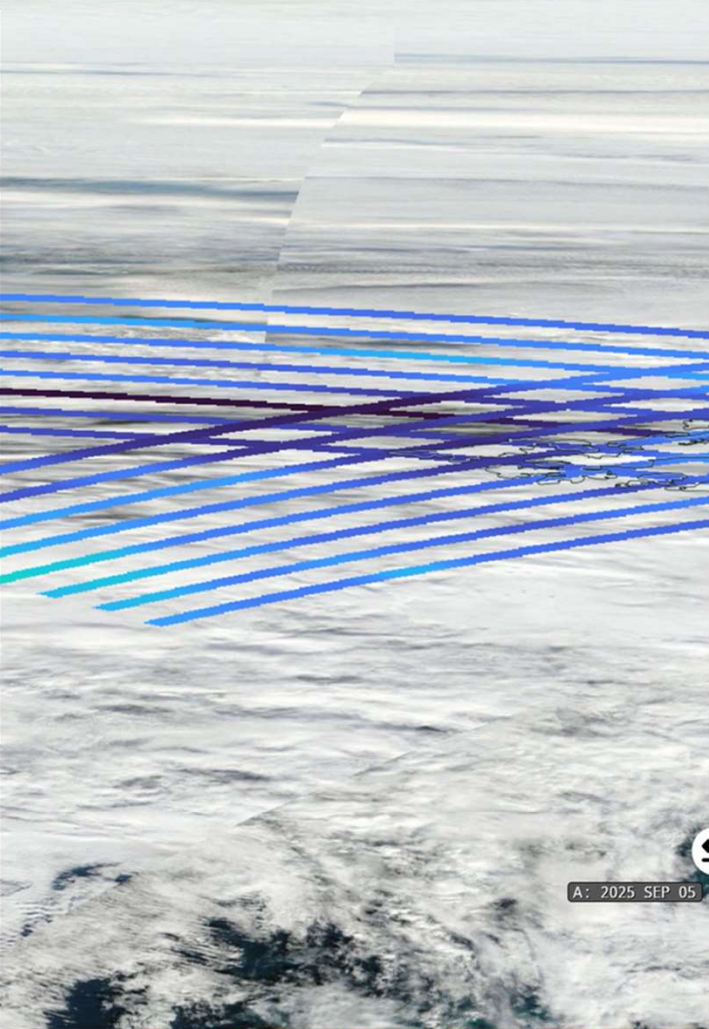
- Corrected Reflectance (True Color) PACE / OCI
- Corrected Reflectance (True Color) NOAA-21 / VIIRS
- Corrected Reflectance (True Color) NOAA-20 / VIIRS
- Corrected Reflectance (True Color) Suomi NPP / VIIRS
- Corrected Reflectance (True Color)

+ Add Layers Group Similar Layers

Comparison Mode

Type: Swipe Opacity Spy

Exit Comparison



NASA Worldview

Layers Events Data

REFERENCE

- Place Labels
Sources: Esri, TomTom, Garmin, FAD, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
- Coastlines / Borders / Roads
© OpenStreetMap contributors
- Coastlines
© OpenStreetMap contributors

OUTGOING RADIATION

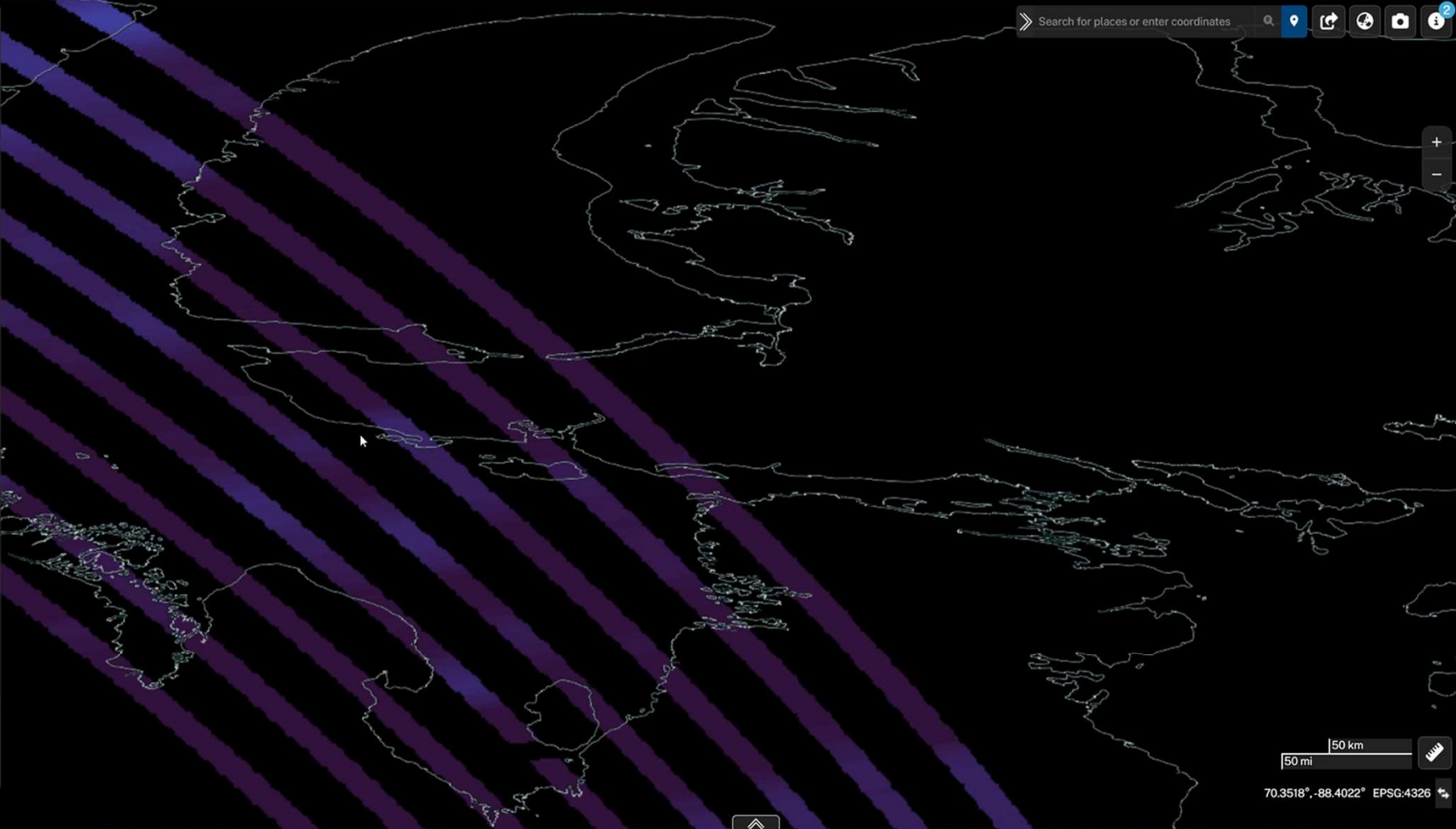
- Far Infrared Outgoing Longwave Radiative Flux (LEO)
PREFIRE-Satellite 2/TIRS **R01 STD**
Color scale: < 90.000 W/m² to >= 329.055 W/m²
- Far Infrared Outgoing Longwave Radiative Flux (LEO)
PREFIRE-Satellite 1/TIRS
Color scale: < 90.000 W/m² to >= 329.055 W/m²

BASE LAYERS

- Corrected Reflectance (True Color) PACE / OCI
- Corrected Reflectance (True Color) NOAA-21 / VIIRS
- Corrected Reflectance (True Color) NOAA-20 / VIIRS
- Corrected Reflectance (True Color) Suomi NPP / VIIRS
- Corrected Reflectance (True Color) Aqua / MODIS
- Corrected Reflectance (True Color) Terra / MODIS **v6.1 STD**

+ Add Layers Group Similar Layers

Start Charting Start Comparison



Search for places or enter coordinates

50 km 50 mi

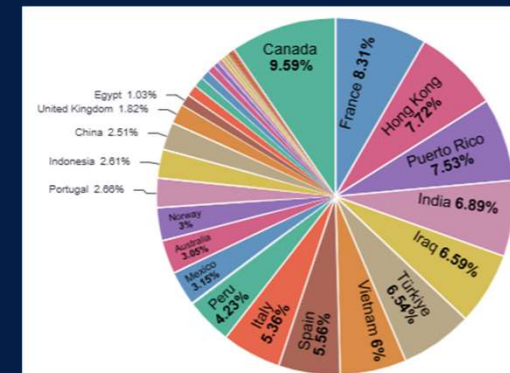
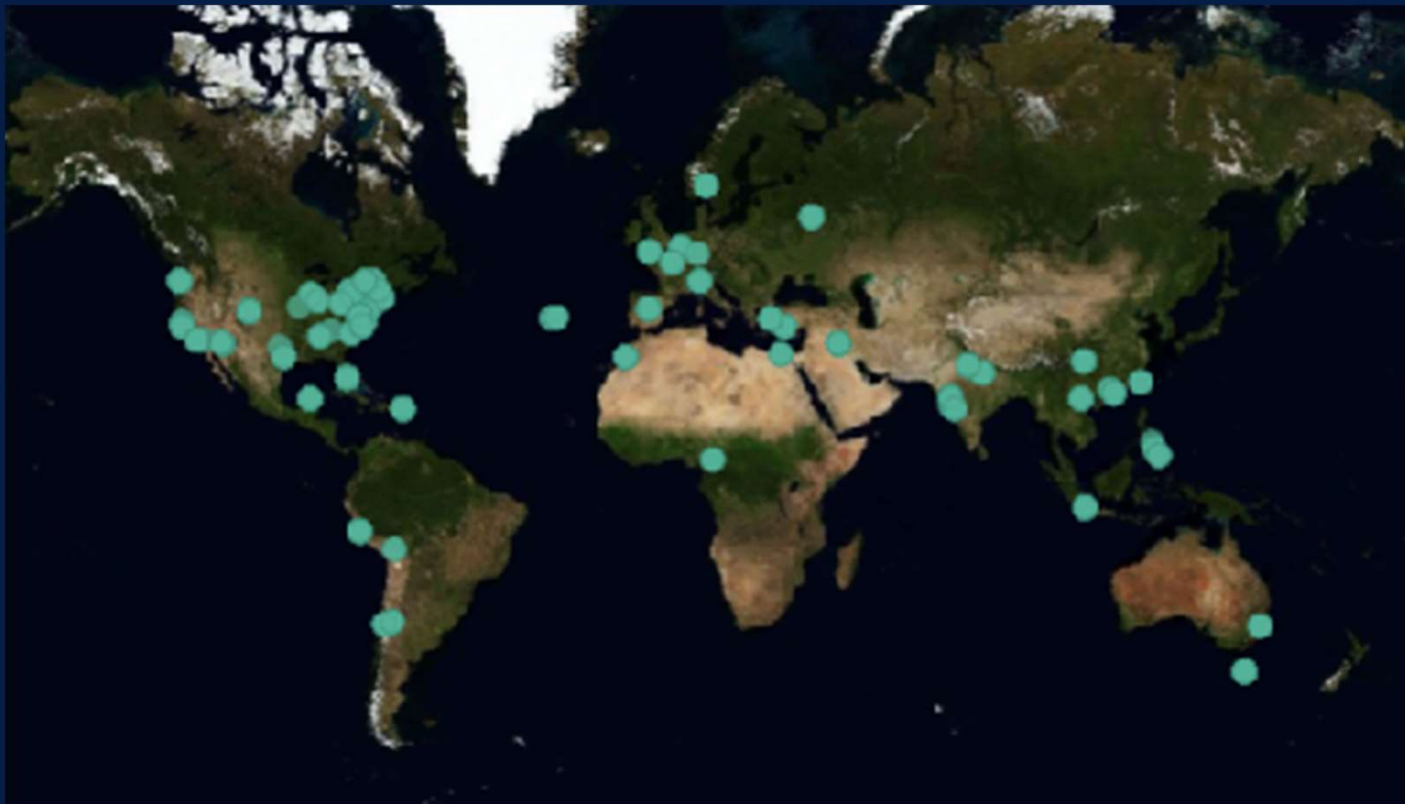
70.3518°, -88.4022° EPSG:4326

90 MINUTE

2025 DEC 24 09 : 54 Z < > |

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PREFIRE on Worldview since August 5th



A satellite-style map of the world is shown, with a semi-transparent blue rectangular overlay covering the middle portion. The map shows continents, oceans, and some cloud cover. The blue overlay contains white text.

Downloading PREFIRE data using Earthdata Search

Hazem Mahmoud

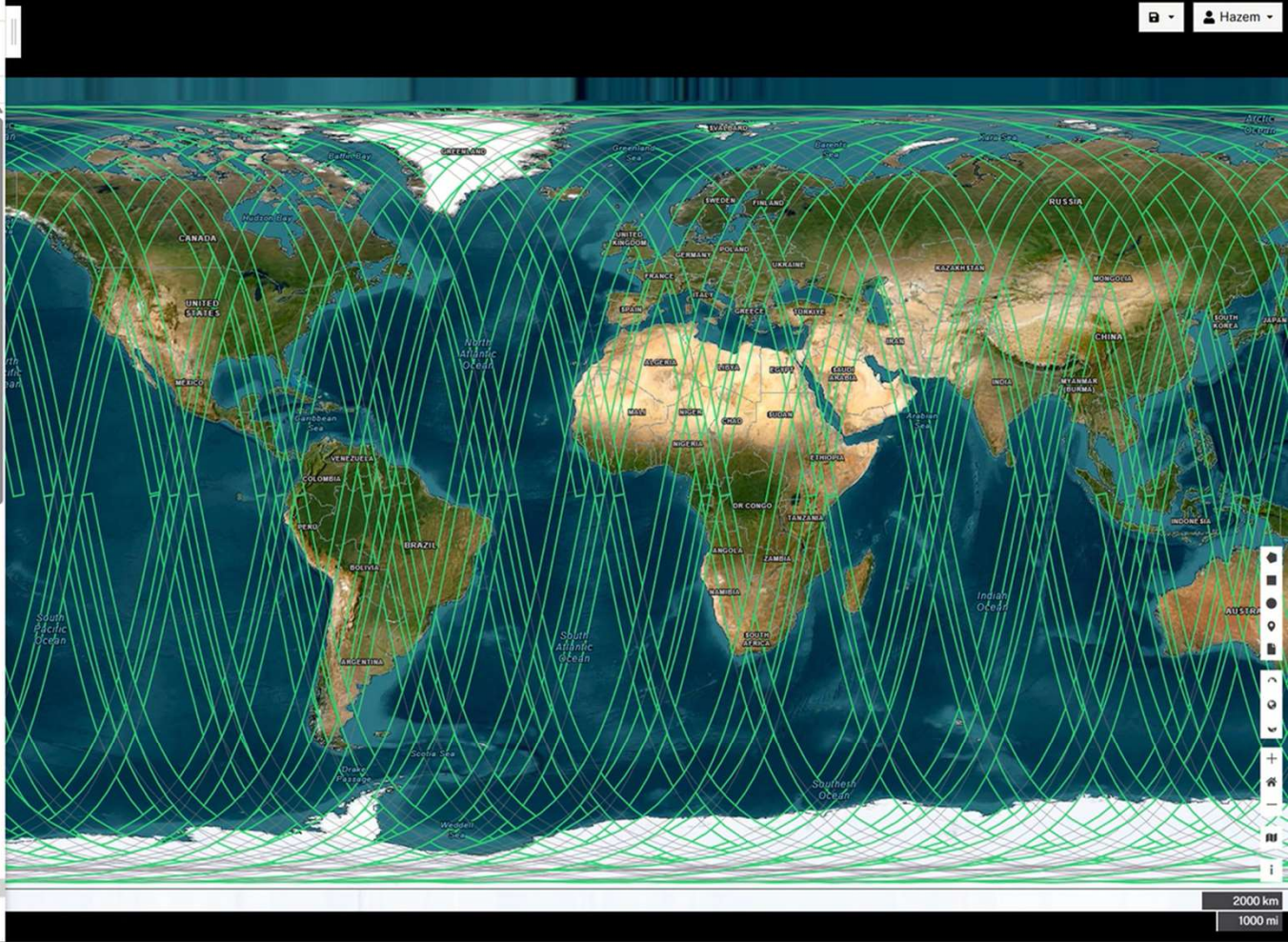
Search Results (18 Collections)

Polar Radiant Energy in the Far InfraRed Experiment (PREFIRE) Surface Emissivity from PREFIRE Satellite 2 R01

Showing 40 of 6,154 matching granules Sort: Start Date (Newest) View: List

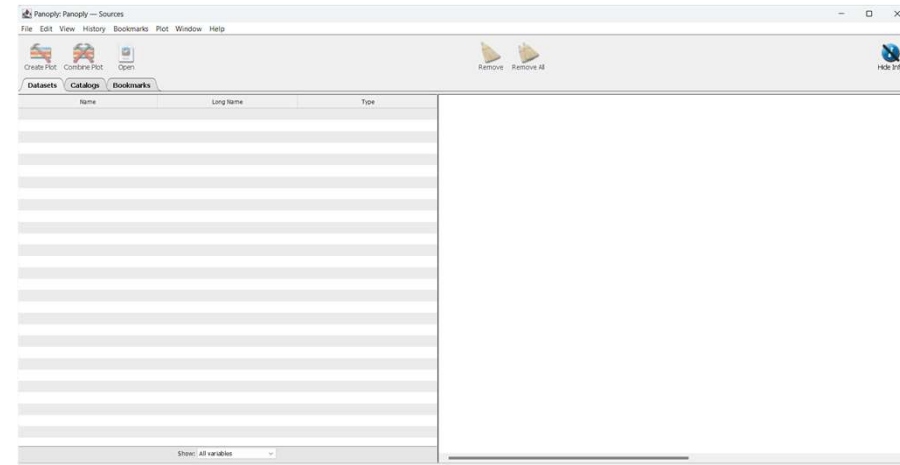
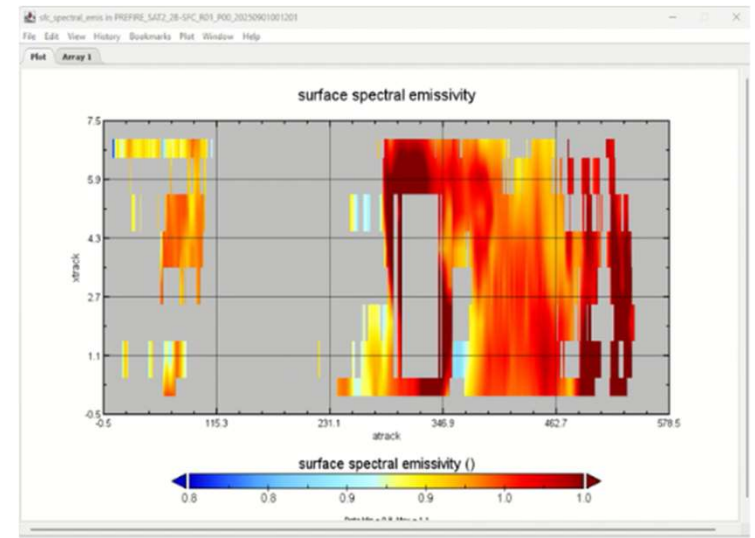
Granule ID	START	END
PREFIRE_SAT2_2B-SFC_R01_P00_20251104233851_08007.nc	2025-11-04 23:38:51	2025-11-05 01:13:43
PREFIRE_SAT2_2B-SFC_R01_P00_20251104220359_08006.nc	2025-11-04 22:03:59	2025-11-04 23:38:51
PREFIRE_SAT2_2B-SFC_R01_P00_20251104202907_08005.nc	2025-11-04 20:29:07	2025-11-04 22:03:58
PREFIRE_SAT2_2B-SFC_R01_P00_20251104185415_08004.nc	2025-11-04 18:54:15	2025-11-04 20:29:06
PREFIRE_SAT2_2B-SFC_R01_P00_20251104171922_08003.nc	2025-11-04 17:19:22	2025-11-04 18:54:14
PREFIRE_SAT2_2B-SFC_R01_P00_20251102144329_07971.nc	2025-11-02 14:43:29	2025-11-02 16:18:28
PREFIRE_SAT2_2B-SFC_R01_P00_20251102130837_07970.nc	2025-11-02 13:08:37	2025-11-02 14:43:28
PREFIRE_SAT2_2B-SFC_R01_P00_20251102113344_07969.nc	2025-11-02 11:33:44	2025-11-02 13:08:36
PREFIRE_SAT2_2B-SFC_R01_P00_20251102095852_07968.nc	2025-11-02 09:58:52	2025-11-02 11:33:43
PREFIRE_SAT2_2B-SFC_R01_P00_20251102082400_07967.nc	2025-11-02 08:24:00	2025-11-02 09:58:52
PREFIRE_SAT2_2B-SFC_R01_P00_20251102064908_07966.nc	2025-11-02 06:49:08	2025-11-02 08:23:59
PREFIRE_SAT2_2B-SFC_R01_P00_20251102051418_07965.nc	2025-11-02 05:14:18	2025-11-02 06:49:07

Subscriptions Add Download All (154)



Visualize with Panoply

- **Visualization Features**
- **Customization & Color Tables**
- **Advanced Plotting Options**
- **Remote Data Accessibility**
- **Export Options**



A satellite-style map of the world is shown at the top and bottom of the slide. The top portion shows North America, Europe, and parts of Asia. The bottom portion shows South America and Africa. A large, semi-transparent blue rectangle covers the middle of the slide, containing the title and author's name. A thin white vertical line is positioned to the right of the title.

Visualizing PREFIRE data using GIS

Hazem Mahmoud

Earthdata Search

https://search.earthdata.nasa.gov/search

EARTHDATA SEARCH Find a DAAC

Search **11,022 Matching Collections**

Showing 20 of 11,022 matching collections

Sort: Usage View: List

Press Enter to search for "prefire"

Filter Collections

Features

- Available in Earthdata Cloud
- Customizable
- Map Imagery

Keywords

Platforms

Instruments

Organizations

Projects

Processing Levels

Data Format

Tiling System

Horizontal Data Resolution

Latency

Additional Filters

- Include collections without granules
- Include only EOSDIS collections

Aqua AIRS-MODIS 1-km Matchup Indexes V1 (Aqua_AIRS_MODIS1km_IND) at GES DISC

1,657,164 Granules 2002-08-31 to Present

This dataset includes Aqua AIRS to MODIS 1-km collocation index product, within the framework of the Multidecadal Satellite Record of Water Vapor...

GEOS5-Aqua_AIRS_MODIS1km_IND v1 - NASA/GSFC/SED/ESD/TISL/GESDISC

OMPS/NPP PCA SO2 Total Column 1-Orbit L2 Swath 50x50km V2 (OMPS_NPP_NMSO2_PCA_L2) at GES DISC

67,197 Granules 2012-01-26 to Present

The OMPS_NPP_NMSO2_PCA_L2 product is part of the MEASUREs (Making Earth System Data Records for Use in Research Environments) suite of...

GEOS5-OMPS_NPP_NMSO2_PCA_L2 v2 - NASA/GSFC/SED/ESD/TISL/GESDISC

TOMS/N7 Near UV Aerosol Index and LER 1-Orbit L2 50x50 km

71,940 Granules 1978-11-02 to 1993-05-06

As part of the NASA's Making Earth System Data Records for Use in Research Environments (MEASUREs) program, this projects describes a multi-decadal...

GEOS5-TOMS7AER v2 - NASA/GSFC/SED/ESD/TISL/GESDISC

TOMS/N7 MS SO2 Vertical Column 1-Orbit L2 Swath 50x50 km V3 (TOMSN7SO2) at GES DISC

71,940 Granules 1978-11-01 to 1993-05-07

Version 3 is the current version of the data set. Older versions will no longer be available and have been superseded by Version 3. The goal of this data set is...

GEOS5-TOMSN7SO2 v3 - NASA/GSFC/SED/ESD/TISL/GESDISC

VIIRS/NPP Imagery Resolution Terrain Corrected Geolocation 6-Min L1 Swath 375 m

1,191,240 Granules 2012-01-19 to Present

The VIIRS/NPP Imagery Resolution Terrain-Corrected Geolocation 6-Min L1 Swath 375m, short-name VNP03IMG, product contains the derived line-of-...

GEOS5-VNP03IMG v2 - NASA/GSFC/SED/ESD/HBSL/BISB/LAADS

OMI/Aura Near UV Aerosol Index, Optical Depth and Single Scattering Albedo 1-Orbit L2 13x24km

95,553 Granules 2004-10-01 to Present

As part of the NASA's Making Earth System Data Records for Use in Research Environments (MEASUREs) program, this projects describes a multi-decadal...

GEOS5-OMIAuraAER v1 - NASA/GSFC/SED/ESD/TISL/GESDISC

OMI/Aura NO2 Tropospheric, Stratospheric & Total Columns MINDS 1-Orbit L2 Swath 13 km x 24 km V1.1 (OMI_MINDS_NO2) at GES DISC

Subscriptions

2000 km
1000 mi

Earthdata Access: A Section 508 accessible alternative

MyProject10

Command Search (Alt+Q)

Not signed in

Project Map Insert Analysis View Edit Imagery Share Help

New Map New Presentation Import Map Connections Add Folder New Investigation Knowledge Graph

New Layout New Notebook Import Layout Task

New Report Toolbox

Point Map Notes Line Map Notes Polygon Map Notes Layer Templates

New Link Chart Distance and Direction Link Analysis Measurements Styles Favorites

Export Raster

Select a raster layer in the contents pane.

Contents

Map

Drawing Order

- World Topographic Map
- World Hillshade

Pop-up

Select an item in the view with the Explore tool.

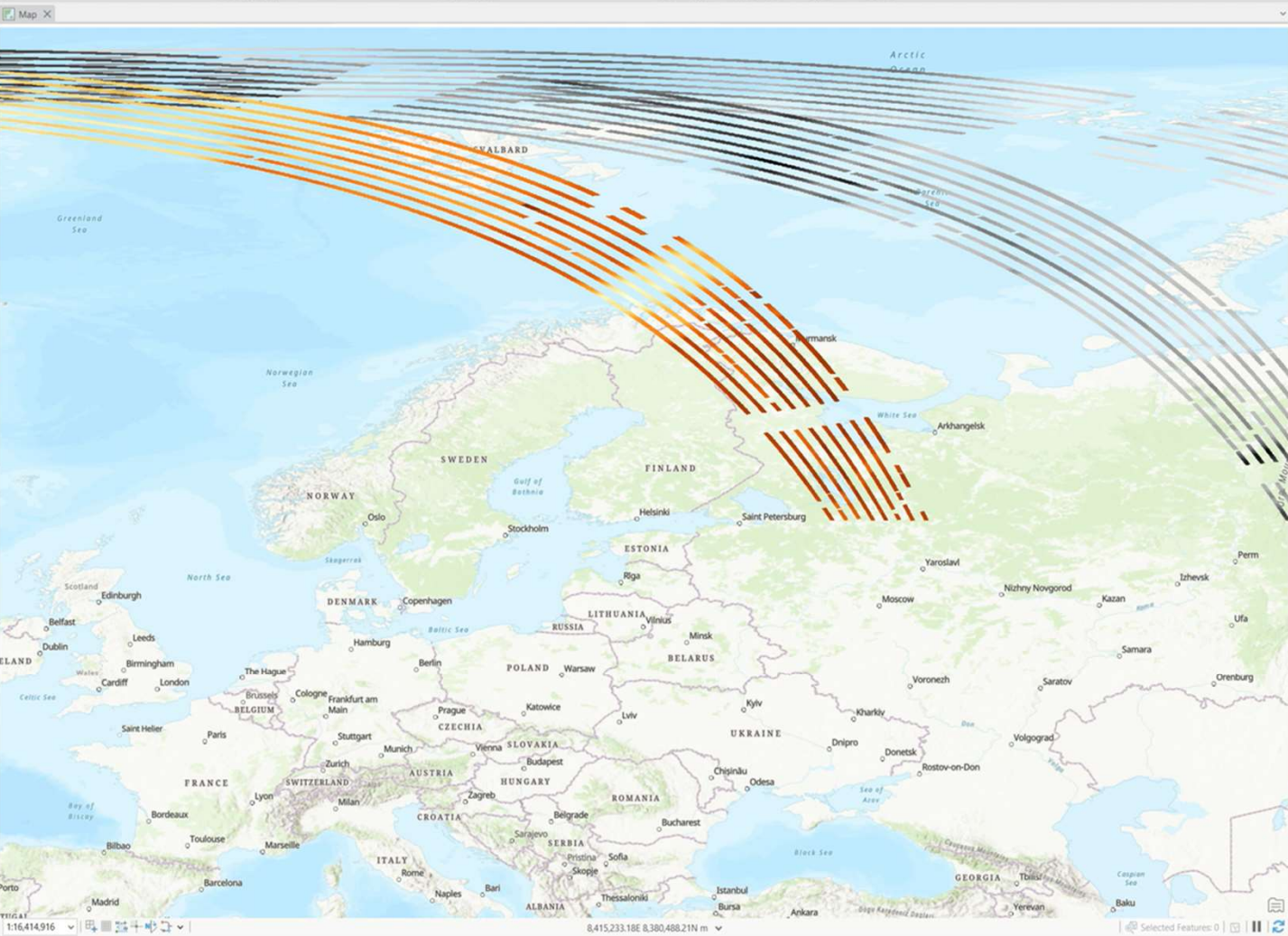
1:74,506,667

Contents

Search

Drawing Order

- Map
 - PREFIRE_SAT1_2B-FLX_R01_P00_20240724235... Value 227 77
 - PREFIRE_SAT1_2B-FLX_R01_P00_20240724222... Value 218 100
 - PREFIRE_SAT1_2B-FLX_R01_P00_20240724204... Value 254 23
 - OLR Value 255 0
- Boundary
- Footprint
- Image
- World Topographic Map
- World Hillshade



Geoprocessing

Add Rasters To Mosaic Dataset

This tool modifies the Mosaic Dataset

Parameters Environments

Mosaic Dataset: OLR

Raster Type: [Dropdown]

Raster Dataset: [Dropdown]

Processing Templates: Default

Input Data: [Dropdown]

File [Selected]

Folder

Dataset

Advanced Input Data Options

Raster Processing

Mosaic Post-processing

Run

Pop-up

Select an item in the view with the Explore tool.

extract_datetime_string(!Name!)

```
def extract_datetime_string(filename):
    try:
        parts = filename.split('_')
        datetime_str = parts[-2]
        if len(datetime_str) == 14:
            # Format as YYYY-MM-DD HH:MM:SS
            formatted = f"{datetime_str[0:4]}-{datetime_str[4:6]}-{datetime_str[6:8]}
{datetime_str[8:10]}:{datetime_str[10:12]}:{datetime_str[12:14]}"
            return formatted
        else:
            return None
    except:
        return None
```



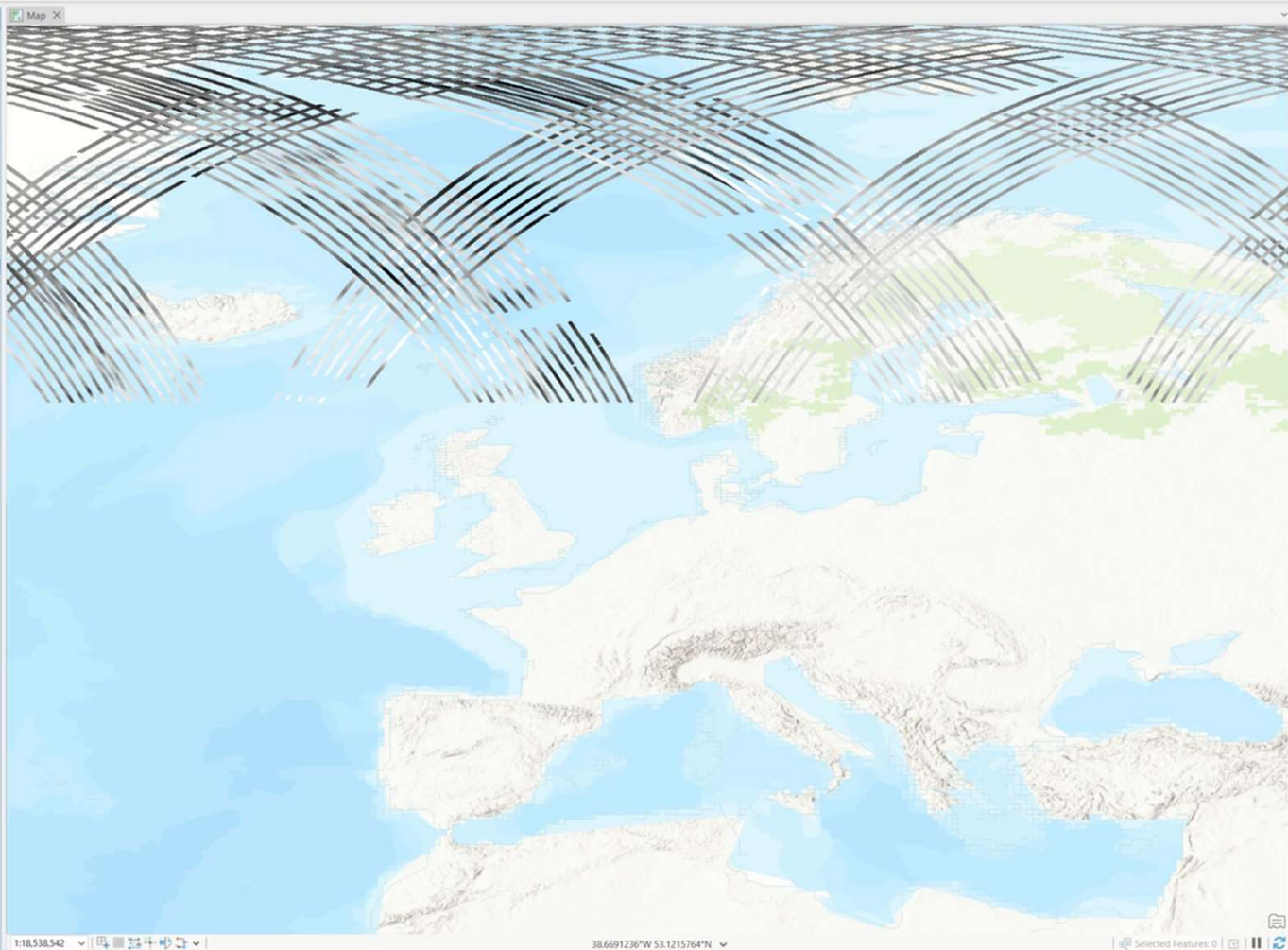
EARTHDATA

Contents

Search

Drawing Order

- Map
- OLR
 - Boundary
 - Footprint
 - Image
- Value
 - 190
 - 0
- World Topographic Map
- World Hillshade



Catalog

Project Portal Computer Favorites

Search Project

- 2025.09.14
- 2025.09.15
- 2025.09.16
- 2025.09.17
- 2025.09.18
- 2025.09.19
- 2025.09.21
- 2025.09.22
- 2025.09.23
- 2025.09.25
- 2025.09.26
- 2025.09.27
- 2025.09.28
- 2025.09.29
- 2025.09.30
- 2025.10.01
- 2025.10.02
- 2025.10.03
- 2025.10.04
- 2025.10.05
- 2025.10.06
- 2025.10.07
- 2025.10.08
- 2025.10.09
- 2025.10.11
- 2025.10.12
- 2025.10.13
- 2025.10.14
- 2025.10.15
- 2025.10.16
- 2025.10.17
- 2025.10.18
- 2025.10.21
- 2025.10.22
- 2025.10.23
- 2025.10.24
- 2025.10.25

Folders

- MyProject17
 - MyProject17.gdb
 - OLR
 - GpMessages
 - ImportLog
 - prefire.acs
 - MyProject17.attbx

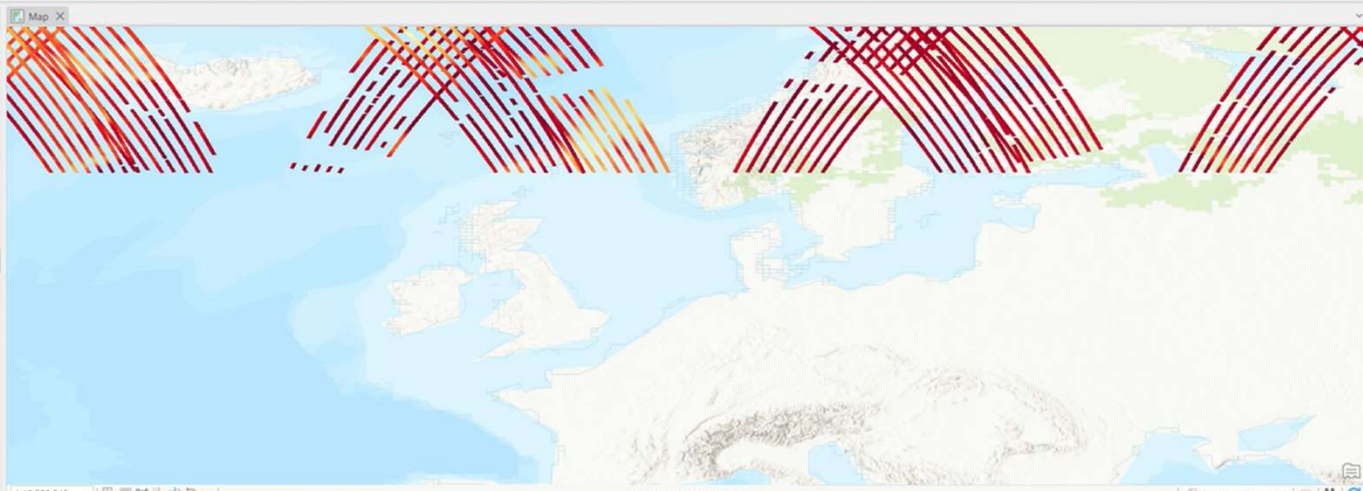
Locators

Contents

Search

Drawing Order

- Map
- OLR
 - Boundary
 - Footprint
 - Image
 - Value
 - 254
 - 5
- World Topographic Map
- World Hillshade



1:18,538,542 45.4018516°E 66.1640337°N Selected Features: 0

OLR: Footprint

Field	Add	Calculate	Selection:	Select By Attributes	Zoom To	Switch	Clear	Delete	Copy	MinPS	MaxPS	LowPS	HighPS	Category	Tag	GroupName	ProductName	CenterX	CenterY	ZOrder	Raster Type ID	ItemTS	UriHash	Uri	Shape_Length	Shape_Area	Field	StdTime
1										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604572	06819984C72CC3A0B...	Blob	1079.999964	64799.995159	<Null>	10/1/2025 1:01:04 AM
2										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604526	AA082CES4A257D3A4...	Blob	1079.999964	64799.995159	<Null>	10/1/2025 2:35:51 AM
3										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604525	276FECDC8503031...	Blob	1079.999964	64799.995159	<Null>	10/1/2025 4:10:39 AM
4										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604523	98468E8D82ADD764A...	Blob	1079.999964	64799.995159	<Null>	10/1/2025 5:45:27 AM
5										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604527	51BEF81888548FFA7...	Blob	1079.999964	64799.995159	<Null>	10/1/2025 7:20:15 AM
6										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604525	C6F57ADCE9F47F0DE...	Blob	1079.999964	64799.995159	<Null>	10/1/2025 8:55:02 AM
7										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.60453	A4AAC9F20E04EAF73...	Blob	1079.999964	64799.995159	<Null>	10/1/2025 10:29:50 AM
8										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604525	8787A8844676E8798...	Blob	1079.999964	64799.995159	<Null>	10/1/2025 12:04:37 PM
9										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604525	6831D8072691C0A8B...	Blob	1079.999964	64799.995159	<Null>	10/1/2025 1:39:25 PM
10										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604524	1343EF1E9AFD3F146D...	Blob	1079.999964	64799.995159	<Null>	10/1/2025 3:14:13 PM
11										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604527	C3C08B1228C5D9466...	Blob	1079.999964	64799.995159	<Null>	10/1/2025 4:49:00 PM
12										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604532	ECF6AE20E0DD80CB...	Blob	1079.999964	64799.995159	<Null>	10/1/2025 6:23:48 PM
13										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604532	52AA36A72E19038783...	Blob	1079.999964	64799.995159	<Null>	10/1/2025 7:56:35 PM
14										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604526	ECEDB19F415C44F777...	Blob	1079.999964	64799.995159	<Null>	10/1/2025 9:33:23 PM
15										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604528	AF75417D4D03C06FA...	Blob	1079.999964	64799.995159	<Null>	10/1/2025 11:08:10 PM
16										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604524	F4416AD7A78347C5E...	Blob	1079.999964	64799.995159	<Null>	10/2/2025 12:42:58 AM
17										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604531	616A44D170AD8847B...	Blob	1079.999964	64799.995159	<Null>	10/2/2025 2:17:45 AM
18										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604527	9378A394522D8E1A8...	Blob	1079.999964	64799.995159	<Null>	10/2/2025 3:52:33 AM
19										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604526	6351882C13F94F7F36...	Blob	1079.999964	64799.995159	<Null>	10/2/2025 5:27:20 AM
20										0	0.8	0.02	0.08	Primary	Dataset		OLR	0	0	<Null>	1	45960.604532	BC7D7D4C8DADA12...	Blob	1079.999964	64799.995159	<Null>	10/2/2025 7:02:08 AM

0 of 240 selected Filters: 100%

Geoprocessing

Statistics

Cell Statistics (Image Analyst Tools)
Calculates a per-cell statistic from multiple rasters.

Cell Statistics (Spatial Analyst Tools)
Calculates a per-cell statistic from multiple rasters.

Line Statistics (Spatial Analyst Tools)
Calculates a statistic on the attributes of lines in a circular neighborhood around each output cell.

Focal Statistics (Image Analyst Tools)
Calculates for each input cell location a statistic of the values within a specified neighborhood around it.

Zonal Statistics (Image Analyst Tools)
Summarizes the values of a raster within the zones of another dataset.

Block Statistics (Spatial Analyst Tools)
Partitions the input into non-overlapping blocks and calculates the statistic of the values within each block. The value is assigned to all of the cells in each block in the output.

Focal Statistics (Spatial Analyst Tools)
Calculates for each input cell location a statistic of the values within a specified neighborhood around it.

Point Statistics (Spatial Analyst Tools)
Calculates a statistic on the points in a neighborhood around each output cell.

Zonal Statistics (Spatial Analyst Tools)
Summarizes the values of a raster within the zones of another dataset.

Summary Statistics (Analysis Tools)
Calculates summary statistics for fields in a table.

Calculate Statistics (Data Management Tools)
Calculates statistics for a raster dataset or a mosaic dataset.

Field Statistics To Table (Data Management Tools)
Creates a table of descriptive statistics for one or more input fields in a table or feature class.

46 items

A satellite-style map of the world is shown at the top and bottom of the slide. The top portion shows North America, Europe, and parts of Asia. The bottom portion shows South America and Africa. A large, semi-transparent blue rectangle covers the middle of the slide, containing the title and author information.

Subsetting PREFIRE data using OPeNDAP and Harmony Subsetting

Hazem Mahmoud

Type to search for data Search

10,942 Matching Collections

Temporal Spatial

Showing 20 of 10,942 matching collections Sort: Usage View: List

Filter Collections

Features

- Available in Earthdata Cloud
- Customizable
- Map Imagery

Keywords

Platforms

Instruments

Organizations

Projects

Processing Levels

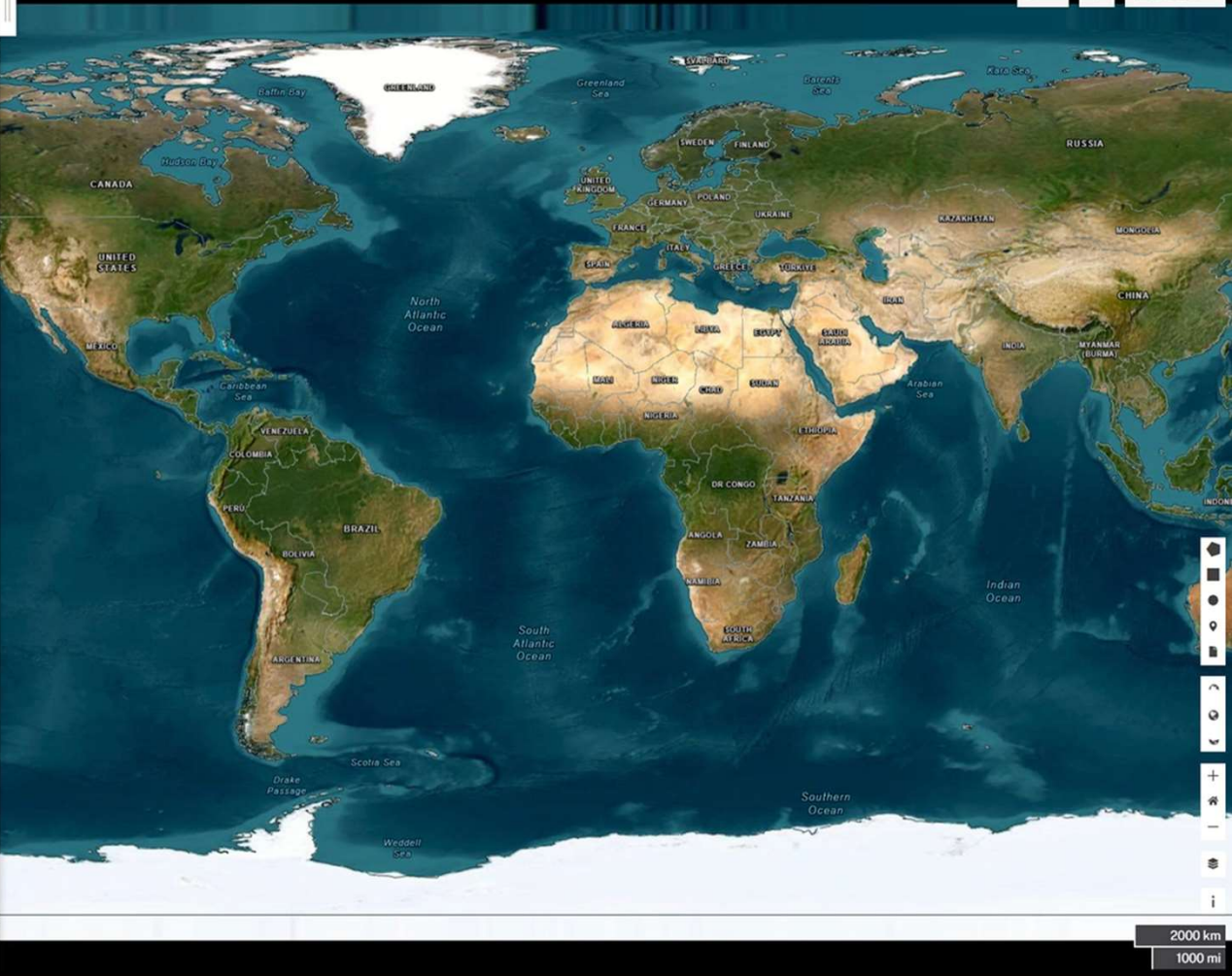
Data Format

Tiling System

Horizontal Data Resolution

Latency

- SENTINEL-1A_SLC**
1,915,712 Granules 2014-04-03 ongoing
Sentinel-1A slant-range product
GEOSS-SENTINEL-1A_SLC v1-ASF
- SENTINEL-1B_SLC**
789,393 Granules 2016-04-25 to 2021-12-24
Sentinel-1B slant-range product
GEOSS-SENTINEL-1B_SLC v1-ASF
- HLS Sentinel-2 Multi-spectral Instrument Surface Reflectance Daily Global 30m v2.0**
18,240,544 Granules 2015-11-28 ongoing
The Harmonized Landsat Sentinel-2 (HLS) project provides consistent surface reflectance data from the Operational Land Imager (OLI) aboard the joint...
GEOSS-HLSS30 v2.0-LP DAAC
- ATLAS/ICESat-2 L2A Global Geolocated Photon Data V006**
476,285 Granules 2018-10-13 ongoing
This data set (ATL03) contains height above the WGS 84 ellipsoid (ITRF2014 reference frame), latitude, longitude, and time for all photons downloaded by...
GEOSS-ATL03 v006-NASA NSIDC DAAC
- ATLAS/ICESat-2 L2A Global Geolocated Photon Data V006**
476,285 Granules 2018-10-13 ongoing
This data set (ATL03) contains height above the WGS 84 ellipsoid (ITRF2014 reference frame), latitude, longitude, and time for all photons downloaded by...
GEOSS-ATL03 v006-NASA NSIDC DAAC
- HLS Landsat Operational Land Imager Surface Reflectance and TOA Brightness Daily Global 30m v2.0**
13,599,628 Granules 2013-04-11 ongoing
The Harmonized Landsat Sentinel-2 (HLS) project provides consistent surface reflectance (SR) and top of atmosphere (TOA) brightness data from a virtual...
GEOSS-HLSL30 v2.0-LP DAAC
- NASA Shuttle Radar Topographic Mission Global 1 arc second V003**



Download Status

This page will automatically update as your orders are processed. The Download Status page can be accessed later by visiting <https://search.earthdata.nasa.gov/downloads/4436484153> or the [Download Status and History](#) page.

Polar Radiant Energy in the Far InfraRed Experiment (PREFIRE) Surface Emissivity Sorted All-sky Climatology from P...

STATUS	ACCESS METHOD	GRANULES
In progress (27%) 0/1 orders complete <i>Updated: 06-05-2025 03:37:21 pm</i>	Harmony	10 Granules

Your orders are currently processing. Once processing is finished, links will be displayed below and sent to the email you've provided.

Download Files STAC Links Order Status

Retrieved 2 files for 10 granules

[Download Files](#) [Copy](#) [Save](#) [Expand](#)


```
https://harmony.earthdata.nasa.gov/service-results/harmony-prod-staging/public/2a213ad4-4092-4342-abee-d85c
https://harmony.earthdata.nasa.gov/service-results/harmony-prod-staging/public/2a213ad4-4092-4342-abee-d85c
```

Additional Resources and Documentation

No additional resources provided

Next Steps

[Back to Earthdata Search Results](#)

A satellite-style map of the world is shown, with a semi-transparent blue overlay covering the middle portion. The overlay contains the title and author information. The map shows the Americas on the left, Europe and Africa in the center, and Asia and Australia on the right.

Accessing PREFIRE data programmatically using Openscapes 2I2C

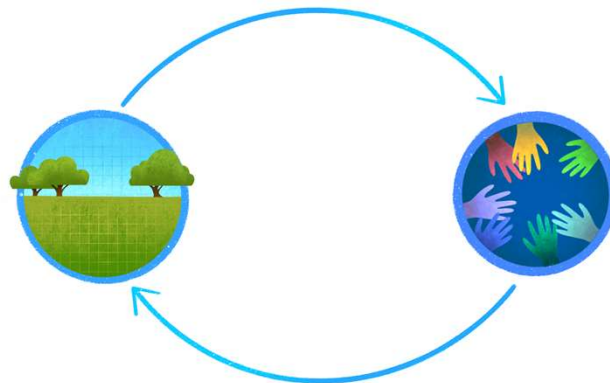
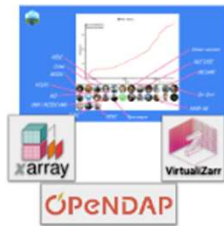
Hazem Mahmoud

What is Openscapes?

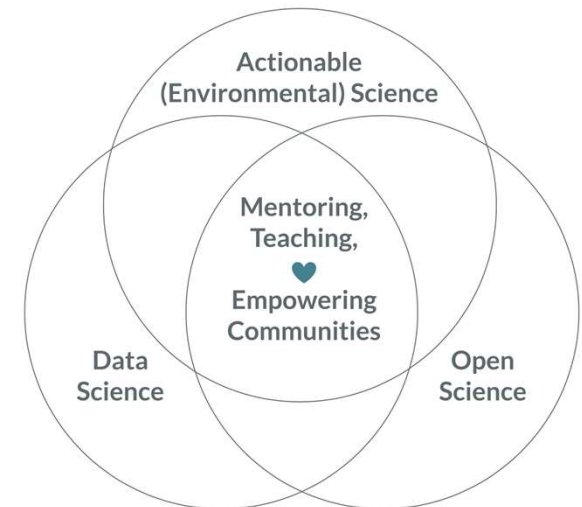
Community-Driven Technical Development



Tooling
tools & practices



People
teams & community



- Virtual datasets: Technical solution + Community validation
- Workshop feedback → Development priorities
- Tools and community evolve together



<https://nasa-openscapes.github.io/>

ASDC_Data_and_User_Services Public Edit Pins Watch 5 Fork 18 Star 45

main 18 Branches 0 Tags Go to file Add file Code

hazemahmoudnasa Merge pull request #54 from nasa/hazemahmoudnasa-pat... 443af40 · 1 hour ago 441 Commits

.github	Bump the gha-dependencies group with 2 updates	3 weeks ago
CALIPSO	add index pages for each mission section	2 months ago
CERES	Add summary and fix url for script_for_downloading_hdf.m	last month
DSCOVR	add index pages for each mission section	2 months ago
MAIA	add index pages for each mission section	2 months ago
MISR	add index pages for each mission section	2 months ago
MOPITT	add index pages for each mission section	2 months ago
POWER	add index pages for each mission section	2 months ago
PREFIRE	Add files via upload	1 hour ago
SAGEIII-ISS	Create earthaccess	last month
STAQS	add index pages for each mission section	2 months ago
TEMPO	Add files via upload	2 weeks ago
TOLNet	add index pages for each mission section	2 months ago
WNA-BackTraj	Add .a extension	last month
additional_quarto_docs	add last published date instruction to contributing doc	5 months ago
.gitignore	add html to gitignore	9 months ago
.pre-commit-config.yaml	add exclusion for 'additional_drafts' subfolders	5 months ago
README.md	update README.md again	9 months ago
_quarto.yml	update prefire virtual datacube notebook and promote to q...	2 months ago
custom_notebook_structure_hook.py	add custom notebook hook	5 months ago
environment.yml	Update quarto publishing process (#12)	last year
index.qmd	update index.qmd text	8 months ago

About

Tutorials for missions conducted by the Atmospheric Science Data Center (ASDC)
[nasa.github.io/ASDC_Data_and_User_Ser...](#)
Readme
Activity
Custom properties
45 stars
5 watching
18 forks
Report repository

Contributors 8



Deployments 112

github-pages 1 hour ago
[+ 111 deployments](#)





Search Google or type a URL AI Mode

- Colaboratory
- Metadata Ma...
- Earthdata Wiki
- Earthdata Se...
- Google Transl...
- Metadata Ma...
- ASDC
- Earthdata Se...
- Add shortcut

PREFIRE Resources



Elizabeth

PREFIRE page at ASDC

PREFIRE
ASDC | Atmospheric Science Data Center

Home / Browse Projects / PREFIRE

Polar Radiant Energy in the Far-InfraRed Experiment

Description | Publications

The PREFIRE mission comprises two space-based Thermal InfraRed Spectrometers (TIRS) aboard two small 6U cube-shaped satellites known as CubeSats. TIRS is a grating spectrometer with a slit projection on the ground aligned cross-track to the satellite motion - a so-called "push broom" configuration. The instrument contains a 2-dimensional focal plane array detector with one dimension aligned cross-track, parallel to the slit (spatial), and the other dimension containing the spectral information from the scene, perpendicular to the slit. PREFIRE CubeSats join a fleet of Earth observation satellites operated by NASA and other space agencies. By synergizing with existing satellite missions, such as the Gravity Recovery and Climate Experiment (GRACE), PREFIRE CubeSats enhance the overall understanding of polar climate processes that have global implications for severe weather frequency and coastal resilience. This integration ensures decision-makers can access accurate sea level rise and storm preparedness projections.

Home Page | PREFIRE Story Map | PREFIRE TIRS spectral response function (SRF) files and browse plots

DISCIPLINES: Tropospheric Composition **Legacy Products**

Recent PREFIRE News

Aug 5, 2025
PREFIRE Data Release Announcement
Read Article

Aug 27, 2025
First PREFIRE Datasets Released NASA Earthdata
Read Article

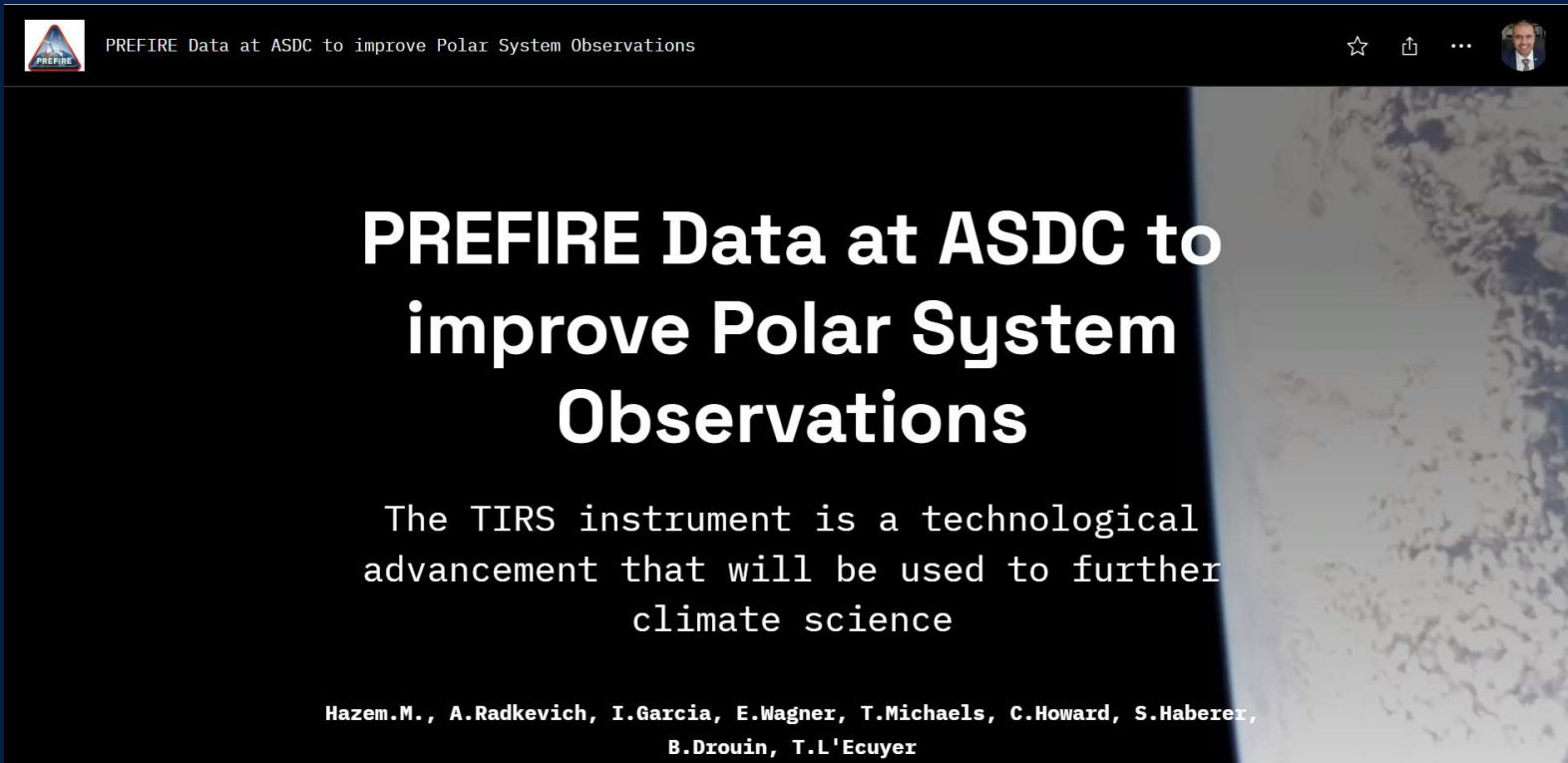
Auxiliary Data | Level 1 | Level 2 | Level 3 | Level 4 | Level 5

Collection	Disciplines	Spatial	Temporal
PREFIRE_SAT1_AUX_MET_R01 PREFIRE Auxiliary Meteorology Data for PREFIRE Satellite 1 version R01	Tropospheric Composition	Spatial Coverage 15 - 84 N, 84 W - 180 E, 1000	Temporal Coverage 2024-07-24 - Present
PREFIRE_SAT1_AUX_SAT_R01 PREFIRE Auxiliary Satellite Data for PREFIRE Satellite 1 R01	Tropospheric Composition	Spatial Coverage 15 - 84 N, 84 W - 180 E, 1000	Temporal Coverage 2024-07-24 - Present
PREFIRE_SAT2_AUX_MET_R01 PREFIRE Auxiliary Meteorology Data for PREFIRE Satellite 2 R01	Tropospheric Composition	Spatial Coverage 15 - 84 N, 84 W - 180 E, 1000	Temporal Coverage 2024-08-09 - Present
PREFIRE_SAT2_AUX_SAT_R01 PREFIRE Auxiliary Satellite Data for PREFIRE Satellite 2 R01	Tropospheric Composition	Spatial Coverage 15 - 84 N, 84 W - 180 E, 1000	Temporal Coverage 2024-08-09 - Present

Showing 1 to 4 of 4 entries

<https://asdc.larc.nasa.gov/project/PREFIRE>

PREFIRE Storymap



The screenshot shows a Storymap interface. At the top left is the PREFIRE logo and the title 'PREFIRE Data at ASDC to improve Polar System Observations'. On the top right are icons for a star, a share button, a menu, and a profile picture. The main content area has a dark background with white text. The title is 'PREFIRE Data at ASDC to improve Polar System Observations'. Below it is a paragraph: 'The TIRS instrument is a technological advancement that will be used to further climate science'. At the bottom, a list of names is displayed: 'Hazem.M., A.Radkevich, I.Garcia, E.Wagner, T.Michaels, C.Howard, S.Haberer, B.Drouin, T.L'Ecuyer'. The right side of the screenshot shows a partial view of a satellite image of a polar region.

PREFIRE Data at ASDC to improve Polar System Observations

PREFIRE Data at ASDC to improve Polar System Observations

The TIRS instrument is a technological advancement that will be used to further climate science

Hazem.M., A.Radkevich, I.Garcia, E.Wagner, T.Michaels, C.Howard, S.Haberer, B.Drouin, T.L'Ecuyer

Earthdata Forum

- **Science Data Users** can seamlessly search for information even if they do not know which DAAC the data belongs to.
- **Scientists & Data Providers** can effectively assist their user community in more accurately using their products.
- **DAACs & Subject Matter Experts (SMEs)** can quickly link users to existing resources.
- **DAAC User Services** can swiftly provide inquirers with an authoritative source related to DAAC data products & services.
- **Tag** posts with “ASDC” or “TEMPO”

The screenshot shows the Earthdata Forum website. At the top, there is a navigation bar with the NASA logo, 'EARTHDATA Forum BETA', and a search bar for DAACs. Below the navigation bar, there is a welcome message: 'Welcome to the Earthdata User Forum! Here, subject matter experts from several NASA Distributed Active Archive Centers (DAAC) can discuss general questions, research needs and data applications. Users can query how to access, view and interpret the data.' The main content area features a 'Post a New Question' button, a search bar, and a 'SEARCH BY TAGS' section with dropdown menus for Discipline, DAAC, Major Projects, and Services/Usage. At the bottom, there is a 'FORUM' section with a table of forum posts.

FORUM	QUESTIONS	POSTS	LAST POST
All Questions/Comments Please enter here to ask a question about any NASA Science related topics!	215	452	Where can I find more FAQs fr... by GES DISC - zliu Fri Feb 21, 2020 10:18 am America/New_York



<https://forum.earthdata.nasa.gov/>

Contact Us

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Brian Drouin

brian.j.drouin@jpl.nasa.gov

Elizabeth Joyner

Elizabeth.r.joyner@nasa.gov

Webinar Resource Guide:

zenodo



EARTHDATA





EARTHDATA

earthdata.nasa.gov

A satellite-style map of the world, showing continents and oceans. The map is centered on the Atlantic Ocean, with North and South America on the left and Europe and Africa on the right. The top of the map shows the Arctic region with snow and ice. The bottom of the map shows the southern tip of South America and the southern part of Africa. A solid blue horizontal band is overlaid across the middle of the map, containing the title and author's name.

Polling Questions

Jennifer Brennan

Download Status

This page will automatically update as your orders are processed. The Download Status page can be accessed later by visiting <https://search.earthdata.nasa.gov/downloads/9333434266> or the [Download Status and History](#) page.

Polar Radiant Energy in the Far InfraRed Experiment (PREFIRE) Surface Emissivity from PREFIRE Satellite 2 R01

STATUS	ACCESS METHOD	GRANULES
● Complete (100%) <small>Updated: 11-09-2025 11:54:57 pm</small>	Download	46 Granules

Download your data directly from the links below, or use the provided download script.

Download Files AWS S3 Access Download Script **Browse Imagery**

Retrieved 46 files for 46 granules

[Copy](#) [Save](#) [Expand](#)

```
https://data.asdc.earthdata.nasa.gov/asdc-prod-public/PREFIRE/PREFIRE_SAT2_2B-SFC_R01/2025.09.05/PREFIRE
https://data.asdc.earthdata.nasa.gov/asdc-prod-public/PREFIRE/PREFIRE_SAT2_2B-SFC_R01/2025.09.05/PREFIRE
https://data.asdc.earthdata.nasa.gov/asdc-prod-public/PREFIRE/PREFIRE_SAT2_2B-SFC_R01/2025.09.05/PREFIRE
https://data.asdc.earthdata.nasa.gov/asdc-prod-public/PREFIRE/PREFIRE_SAT2_2B-SFC_R01/2025.09.05/PREFIRE
https://data.asdc.earthdata.nasa.gov/asdc-prod-public/PREFIRE/PREFIRE_SAT2_2B-SFC_R01/2025.09.05/PREFIRE
https://data.asdc.earthdata.nasa.gov/asdc-prod-public/PREFIRE/PREFIRE_SAT2_2B-SFC_R01/2025.09.05/PREFIRE
https://data.asdc.earthdata.nasa.gov/asdc-prod-public/PREFIRE/PREFIRE_SAT2_2B-SFC_R01/2025.09.05/PREFIRE
https://data.asdc.earthdata.nasa.gov/asdc-prod-public/PREFIRE/PREFIRE_SAT2_2B-SFC_R01/2025.09.05/PREFIRE
https://data.asdc.earthdata.nasa.gov/asdc-prod-public/PREFIRE/PREFIRE_SAT2_2B-SFC_R01/2025.09.04/PREFIRE
https://data.asdc.earthdata.nasa.gov/asdc-prod-public/PREFIRE/PREFIRE_SAT2_2B-SFC_R01/2025.09.04/PREFIRE
```

Additional Resources and Documentation

No additional resources provided

Next Steps

- [Back to Earthdata Search Results](#)
- [Start a New Earthdata Search Session](#)
- [View Your Download Status & History](#)

Download Status

This page will automatically update as your orders are processed. The Download Status page can be accessed later by visiting <https://search.earthdata.nasa.gov/downloads/3666443233> or the [Download Status and History](#) page.

Polar Radiant Energy in the Far InfraRed Experiment (PREFIRE) Surface Emissivity from PREFIRE Satellite 2 R01

STATUS	ACCESS METHOD	GRANULES
● Complete (100%) 1/1 orders complete Updated: 11-09-2025 11:55:34 pm	Harmony	46 Granules

Your orders are done processing and are available for download.

Service has responded with message:

- WorkItem warned: podaac/izs-py:3.2.0: No data in subsetted granule.

Download Files STAC Links Order Status

Retrieved 1 file for 46 granules

[Download Files](#) [Copy](#) [Save](#) [Expand](#)

001201_07021_Sfc_sfc_spectral_emis_subsetted_20250905T225045Z_C3499264824-LARC_CLOUD_merged.nc4

Additional Resources and Documentation

No additional resources provided

Next Steps

- [Back to Earthdata Search Results](#)
- [Start a New Earthdata Search Session](#)
- [View Your Download Status & History](#)

Earthdata Search

https://search.earthdata.nasa.gov/search

EARTHDATA SEARCH Find a DAAC

Search **11,022 Matching Collections**

Showing 20 of 11,022 matching collections

Sort: Usage View: List

Press Enter to search for "prefire"

Filter Collections

Features

- Available in Earthdata Cloud
- Customizable
- Map Imagery

Keywords

Platforms

Instruments

Organizations

Projects

Processing Levels

Data Format

Tiling System

Horizontal Data Resolution

Latency

Additional Filters

- Include collections without granules
- Include only EOSDIS collections

Aqua AIRS-MODIS 1-km Matchup Indexes V1 (Aqua_AIRS_MODIS1km_IND) at GES DISC

1,657,164 Granules 2002-08-31 to Present

This dataset includes Aqua AIRS to MODIS 1-km collocation index product, within the framework of the Multidecadal Satellite Record of Water Vapor...

GEOS5-Aqua_AIRS_MODIS1km_IND v1 - NASA/GSFC/SED/ESD/TISL/GESDISC

OMPS/NPP PCA SO2 Total Column 1-Orbit L2 Swath 50x50km V2 (OMPS_NPP_NMSO2_PCA_L2) at GES DISC

67,197 Granules 2012-01-26 to Present

The OMPS_NPP_NMSO2_PCA_L2 product is part of the MEASUREs (Making Earth System Data Records for Use in Research Environments) suite of...

GEOS5-OMPS_NPP_NMSO2_PCA_L2 v2 - NASA/GSFC/SED/ESD/TISL/GESDISC

TOMS/N7 Near UV Aerosol Index and LER 1-Orbit L2 50x50 km

71,940 Granules 1978-11-02 to 1993-05-06

As part of the NASA's Making Earth System Data Records for Use in Research Environments (MEASUREs) program, this projects describes a multi-decadal...

GEOS5-TOMS7AER v2 - NASA/GSFC/SED/ESD/TISL/GESDISC

TOMS/N7 MS SO2 Vertical Column 1-Orbit L2 Swath 50x50 km V3 (TOMSN7SO2) at GES DISC

71,940 Granules 1978-11-01 to 1993-05-07

Version 3 is the current version of the data set. Older versions will no longer be available and have been superseded by Version 3. The goal of this data set is...

GEOS5-TOMSN7SO2 v3 - NASA/GSFC/SED/ESD/TISL/GESDISC

VIIRS/NPP Imagery Resolution Terrain Corrected Geolocation 6-Min L1 Swath 375 m

1,191,240 Granules 2012-01-19 to Present

The VIIRS/NPP Imagery Resolution Terrain-Corrected Geolocation 6-Min L1 Swath 375m, short-name VNP03IMG, product contains the derived line-of-...

GEOS5-VNP03IMG v2 - NASA/GSFC/SED/ESD/HBSL/BISB/LAADS

OMI/Aura Near UV Aerosol Index, Optical Depth and Single Scattering Albedo 1-Orbit L2 13x24km

95,553 Granules 2004-10-01 to Present

As part of the NASA's Making Earth System Data Records for Use in Research Environments (MEASUREs) program, this projects describes a multi-decadal...

GEOS5-OMIAuraAER v1 - NASA/GSFC/SED/ESD/TISL/GESDISC

OMI/Aura NO2 Tropospheric, Stratospheric & Total Columns MINDS 1-Orbit L2 Swath 13 km x 24 km V1.1 (OMI_MINDS_NO2) at GES DISC

Subscriptions

2000 km
1000 mi

Earthdata Access: A Section 508 accessible alternative

MyProject10

Command Search (Alt+Q)

Not signed in

Project Map Insert Analysis View Edit Imagery Share Help

New Map New Presentation Import Map Connections Add Folder New Investigation Knowledge Graph

New Layout New Notebook Import Layout Task Knowledge Graph

Point Map Notes Line Map Notes Polygon Map Notes Layer Templates

New Link Chart Distance and Direction Link Analysis Measurements Styles Favorites

Export Raster

Select a raster layer in the contents pane.

Contents

Map

Drawing Order

- World Topographic Map
- World Hillshade

1:74,506,667

Selected Features: 0

Pop-up

Select an item in the view with the Explore tool.

Earthdata Search

https://search.earthdata.nasa.gov/search

EARTHDATA SEARCH Find a DAAC

Search **11,022 Matching Collections**

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2000 km
1000 mi

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MyProject10

Command Search (Alt+Q)

Not signed in

Project Map Insert Analysis View Edit Imagery Share Help

New Map New Presentation Import Map Connections Add Folder New Investigation Knowledge Graph

New Layout New Notebook Import Layout Task

New Report Toolbox

Point Map Notes Line Map Notes Polygon Map Notes Layer Templates

New Link Chart Distance and Direction Link Analysis Measurements Styles Favorites

Export Raster

Select a raster layer in the contents pane.

Contents

Map

Drawing Order

- World Topographic Map
- World Hillshade

Pop-up

Select an item in the view with the Explore tool.

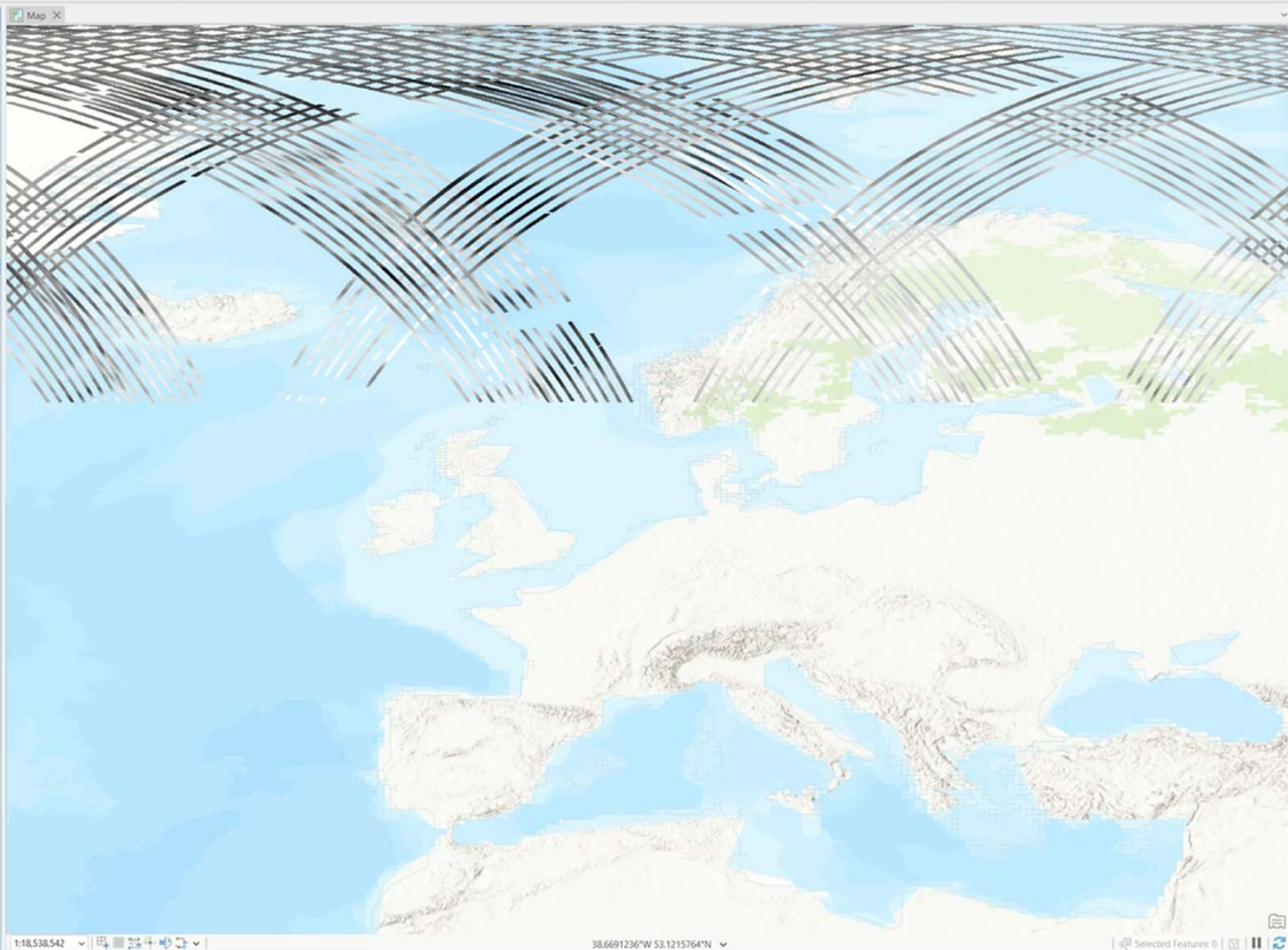
1:74,506,667

Contents

Search

Drawing Order

- Map
- OLR
 - Boundary
 - Footprint
 - Image
- Value: 190 to 0
- World Topographic Map
- World Hillshade



Catalog

Project Portal Computer Favorites

Search Project

- 2025.09.14
- 2025.09.15
- 2025.09.16
- 2025.09.17
- 2025.09.18
- 2025.09.19
- 2025.09.21
- 2025.09.22
- 2025.09.23
- 2025.09.25
- 2025.09.26
- 2025.09.27
- 2025.09.28
- 2025.09.29
- 2025.09.30
- 2025.10.01
- 2025.10.02
- 2025.10.03
- 2025.10.04
- 2025.10.05
- 2025.10.06
- 2025.10.07
- 2025.10.08
- 2025.10.09
- 2025.10.11
- 2025.10.12
- 2025.10.13
- 2025.10.14
- 2025.10.15
- 2025.10.16
- 2025.10.17
- 2025.10.18
- 2025.10.21
- 2025.10.22
- 2025.10.23
- 2025.10.24
- 2025.10.25

Folders

- MyProject17
 - MyProject17.gdb
 - OLR
 - GpMessages
 - ImportLog
 - prefire.acs
 - MyProject17.attbx

Locators

ASDC_Data_and_User_Services Public Edit Pins Watch 5 Fork 18 Star 45

main 18 Branches 0 Tags Go to file Add file Code

hazemahmoudnasa Merge pull request #54 from nasa/hazemahmoudnasa-pat... 443af40 · 1 hour ago 441 Commits

.github	Bump the gha-dependencies group with 2 updates	3 weeks ago
CALIPSO	add index pages for each mission section	2 months ago
CERES	Add summary and fix url for script_for_downloading_hdf.m	last month
DSCOVR	add index pages for each mission section	2 months ago
MAIA	add index pages for each mission section	2 months ago
MISR	add index pages for each mission section	2 months ago
MOPITT	add index pages for each mission section	2 months ago
POWER	add index pages for each mission section	2 months ago
PREFIRE	Add files via upload	1 hour ago
SAGEIII-ISS	Create earthaccess	last month
STAQS	add index pages for each mission section	2 months ago
TEMPO	Add files via upload	2 weeks ago
TOLNet	add index pages for each mission section	2 months ago
WNA-BackTraj	Add .a extension	last month
additional_quarto_docs	add last published date instruction to contributing doc	5 months ago
.gitignore	add html to gitignore	9 months ago
.pre-commit-config.yaml	add exclusion for 'additional_drafts' subfolders	5 months ago
README.md	update README.md again	9 months ago
_quarto.yml	update prefire virtual datacube notebook and promote to q...	2 months ago
custom_notebook_structure_hook.py	add custom notebook hook	5 months ago
environment.yml	Update quarto publishing process (#12)	last year
index.qmd	update index.qmd text	8 months ago

About

Tutorials for missions conducted by the Atmospheric Science Data Center (ASDC)
[nasa.github.io/ASDC_Data_and_User_Ser...](#)
Readme
Activity
Custom properties
45 stars
5 watching
18 forks
Report repository

Contributors 8



Deployments 112

github-pages 1 hour ago
[+ 111 deployments](#)



PREFIRE Data in the Cloud

- Primary motivations
 - To allow the science community to do unprecedented science with unconstrained processing and storage capacity across all EOSDIS data in a highly available environment (AWS)
 - The size of future datasets makes on-premise archiving undesirable
 - TEMPO, CLARREO-PF and PREFIRE are ingested on the cloud using Cumulus
- EOSDIS pays for the storage. Users pay for their own compute resources.
- Data download will still be available free of charge.
- User experience will not be interrupted or degraded.
- Activities are being planned in a way to avoid introducing technical and schedule risks and dependencies.



Type to search for data Search

10,942 Matching Collections

Temporal Spatial

Showing 20 of 10,942 matching collections Sort: Usage View: List

Filter Collections

Features

- Available in Earthdata Cloud
- Customizable
- Map Imagery

Keywords

Platforms

Instruments

Organizations

Projects

Processing Levels

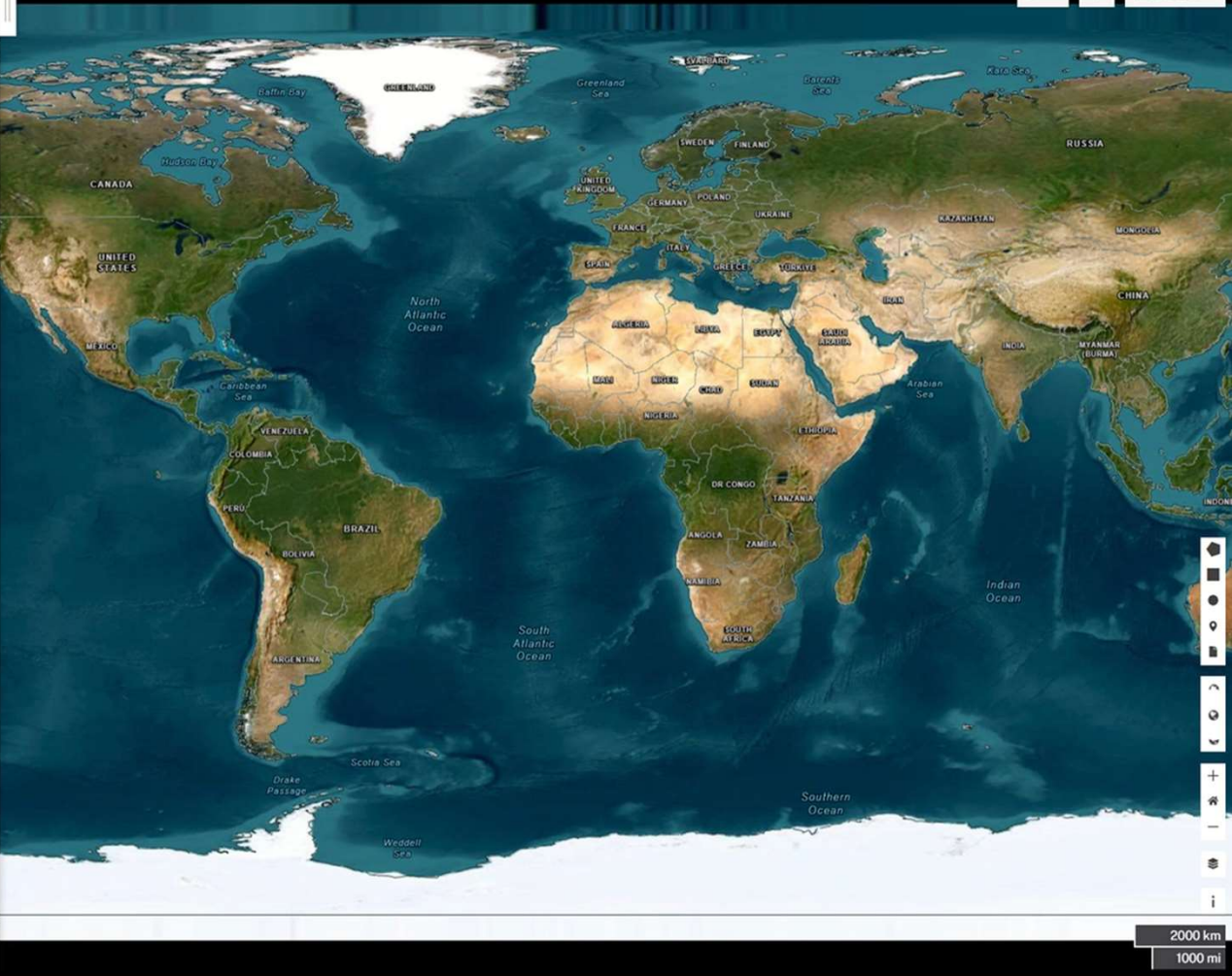
Data Format

Tiling System

Horizontal Data Resolution

Latency

- SENTINEL-1A_SLC**
1,915,712 Granules 2014-04-03 ongoing
Sentinel-1A slant-range product
GEOSS-SENTINEL-1A_SLC v1-ASF
- SENTINEL-1B_SLC**
789,393 Granules 2016-04-25 to 2021-12-24
Sentinel-1B slant-range product
GEOSS-SENTINEL-1B_SLC v1-ASF
- HLS Sentinel-2 Multi-spectral Instrument Surface Reflectance Daily Global 30m v2.0**
18,240,544 Granules 2015-11-28 ongoing
The Harmonized Landsat Sentinel-2 (HLS) project provides consistent surface reflectance data from the Operational Land Imager (OLI) aboard the joint...
GEOSS-HLSS30 v2.0-LP DAAC
- ATLAS/ICESat-2 L2A Global Geolocated Photon Data V006**
476,285 Granules 2018-10-13 ongoing
This data set (ATL03) contains height above the WGS 84 ellipsoid (ITRF2014 reference frame), latitude, longitude, and time for all photons downloaded by...
GEOSS-ATL03 v006-NASA NSIDC DAAC
- ATLAS/ICESat-2 L2A Global Geolocated Photon Data V006**
476,285 Granules 2018-10-13 ongoing
This data set (ATL03) contains height above the WGS 84 ellipsoid (ITRF2014 reference frame), latitude, longitude, and time for all photons downloaded by...
GEOSS-ATL03 v006-NASA NSIDC DAAC
- HLS Landsat Operational Land Imager Surface Reflectance and TOA Brightness Daily Global 30m v2.0**
13,599,628 Granules 2013-04-11 ongoing
The Harmonized Landsat Sentinel-2 (HLS) project provides consistent surface reflectance (SR) and top of atmosphere (TOA) brightness data from a virtual...
GEOSS-HLSL30 v2.0-LP DAAC
- NASA Shuttle Radar Topographic Mission Global 1 arc second V003**





Type your message here...
📎 ⬆

- 🔄 Spatial and Temporal Ranges
- Spatial Only
- 🕒 Spatial and Temporal Since
- 📅 Fine Grained Temporal Ranges

ASDC GitHub

ASDC_Data_and_User_Services Public

main 4 Branches 0 Tags

alexrad71 Add files via upload 16 hours ago 335 Commits

.github/workflows	simplify args to quarto-publish workflow	6 months ago
CALLIPSO	improve summary and add link for mission	3 weeks ago
CERES	link to GitHub version of scripts instead of bare files	4 months ago
DSCOVER	add prerequisite section to header text	3 weeks ago
MAIA	update header and reduce duplication	3 weeks ago
MISR	add last modified dates to quarto header of notebooks	3 weeks ago
MOPITT	add last modified dates to quarto header of notebooks	3 weeks ago
POWER	Update with how to obtain netCDF	last week
PREFIRE	Add files via upload	16 hours ago
SAGEIII-ISS	add last modified dates to quarto header of notebooks	3 weeks ago
STAQS	Add files via upload	last month
TEMPO	remove TOC, and add prerequisites	3 weeks ago

About

Tutorials for missions conducted by the Atmospheric Science Data Center (ASDC)

[nasa.github.io/ASDC_Data_and_User_Ser...](#)

Readme

Activity

Custom properties

38 stars

6 watching

14 forks

Report repository

Contributors 6

Deployments 73

github-pages 16 hours ago

+ 72 deployments



https://github.com/nasa/ASDC_Data_and_User_Services/tree/main



Search Google or type a URL AI Mode

- Colaboratory
- Metadata Ma...
- Earthdata Wiki
- Earthdata Se...
- Google Transl...
- Metadata Ma...
- ASDC
- Earthdata Se...
- Add shortcut

OPeNDAP

- API Access
- Subsetting & Aggregation
- File Conversions

The screenshot displays the Earthdata Search web application. The top navigation bar includes the 'EARTHDATA SEARCH' logo and a search bar. Below the search bar, there are filters for 'Temporal' and 'Spatial'. The main content area shows a list of 10,942 matching collections, with 20 items displayed. The first three items are:

- SENTINEL-1A_SLC**: 1,915,702 Granules, 2014-04-03 ongoing. Sentinel-1A slant-range product.
- SENTINEL-1B_SLC**: 789,393 Granules, 2016-04-25 to 2021-12-24. Sentinel-1B slant-range product.
- HLS Sentinel-2 Multi-spectral Instrument Surface Reflectance Daily Global 30m v2.0**: 18,240,106 Granules, 2015-11-28 ongoing. The Harmonized Landsat Sentinel-2 (HLS) project provides consistent surface reflectance data from the Operational Land Imager (OLI) aboard the joint...

The right side of the interface features a world map with a search area highlighted in the North Atlantic. The bottom of the page includes a footer with 'v05.2.0', 'Search Time: 2.7s', and 'NASA Official: Doug Newman'.

cwv_prior[/atrack= 0..7838] [/xtrack= 0..7] (Type is Float32)
[] []
+ attributes

wv_profile_prior[/atrack= 0..7838] [/xtrack= 0..7] [/nlayers= 0..6] (Type is Float32)
[] [] []
+ attributes

T_profile[/atrack= 0..7838] [/xtrack= 0..7] [/nlayers= 0..6] (Type is Float32)
[] [] []
+ attributes

posterior_covariance[/atrack= 0..7838] [/xtrack= 0..7] [/statev1= 0..14] [/statev2= 0..14] (Type is Float32)
[] [] [] []
+ attributes

iterations[/atrack= 0..7838] [/xtrack= 0..7] (Type is Int8)
[] []
+ attributes

cwv[/atrack= 0..7838] [/xtrack= 0..7] (Type is Float32)
0:1:7838 0:1:7
- attributes
▪ **_FillValue:** -9999. (Type is Float32)
▪ **units:** mm (Type is String)
▪ **long_name:** column water vapor (Type is String)
▪ **description:** column water vapor computed by integrating the retrieved water vapor profile (Type is String)

cwv_unc[/atrack= 0..7838] [/xtrack= 0..7] (Type is Float32)
[] []
+ attributes

surface_T_prior[/atrack= 0..7838] [/xtrack= 0..7] (Type is Float32)
[] []
+ attributes

wv_profile_unc[/atrack= 0..7838] [/xtrack= 0..7] [/nlayers= 0..6] (Type is Float32)
[] [] []
+ attributes

diverging_steps[/atrack= 0..7838] [/xtrack= 0..7] (Type is Int8)
[] []
+ attributes

surface_T_unc[/atrack= 0..7838] [/xtrack= 0..7] (Type is Float32)



EARTHDATA

NASA Worldview

Layers Events Data

REFERENCE

- Place Labels
- Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
- Coastlines / Borders / Roads
- Coastlines

BASE LAYERS


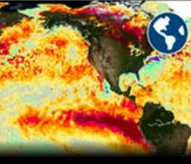







- Corrected Reflectance (True Color) PACE / OCI
- Corrected Reflectance (True Color) NOAA-21 / VIIRS
- Corrected Reflectance (True Color) NOAA-20 / VIIRS
- Corrected Reflectance (True Color) Suomi NPP / VIIRS
- Corrected Reflectance (True Color) Aqua / MODIS
- Corrected Reflectance (True Color) Terra / MODIS v6.1 NRT

+ Add Layers Group Similar Layers

Start Charting Start Comparison

Welcome to NASA Worldview

Visually explore the past and the present of this dynamic planet from a satellite's perspective. Select from an array of stories below to learn more about Worldview (a part of NASA Earthdata), the satellite imagery we provide and events occurring around the world. Start using Worldview

 Land Surface Disturbance	 El Niño Impacts Around the Globe	 Surface Water Extent
 Atmospheric Rivers	 Harmonized Landsat Sentinel-2	 Assessing Floodwaters
 Night Lights from NASA's Black Marble	 Geostationary Imagery Every 10 Minutes!	 Satellite Detections of Fire (2021 update)

Do not show until a new story has been added.



2025 OCT 29 | 1 DAY | AUG 2025 | SEP 2025 | OCT 2025 | DAY

Earthdata Pub

- Request to publish your data at a DAAC
- Submit information and files required to publish your data
- Track the publication status of your data
- Access resources for data producers

EARTHDATA Find a DAAC - Feedback

NASA Earthdata Pub Overview Beta Dashboard

NASA Earthdata Pub

Earthdata Pub is the easy, online place for Earth Science researchers to publish their data at a NASA Distributed Active Archive Center (DAAC)

[Get Started](#) [Data Producer Resources](#)

What is Earthdata Pub?

Earthdata Pub is the easy, online place for Earth Science researchers to publish their data at a NASA Distributed Active Archive Center (DAAC). Using Earthdata Pub you can:

- Request to publish your data at a DAAC
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Earthdata Pub Features

With Earthdata Pub you can create and track your request in a seamless workflow. Some of the features that we provide are:

[Guided Process](#) [Real-time Tracking](#) [Collaborate with DAACs](#)

NASA Worldview

Layers Events Data

REFERENCE

- Place Labels
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
- Coastlines / Borders / Roads
© OpenStreetMap contributors
- Coastlines
© OpenStreetMap contributors

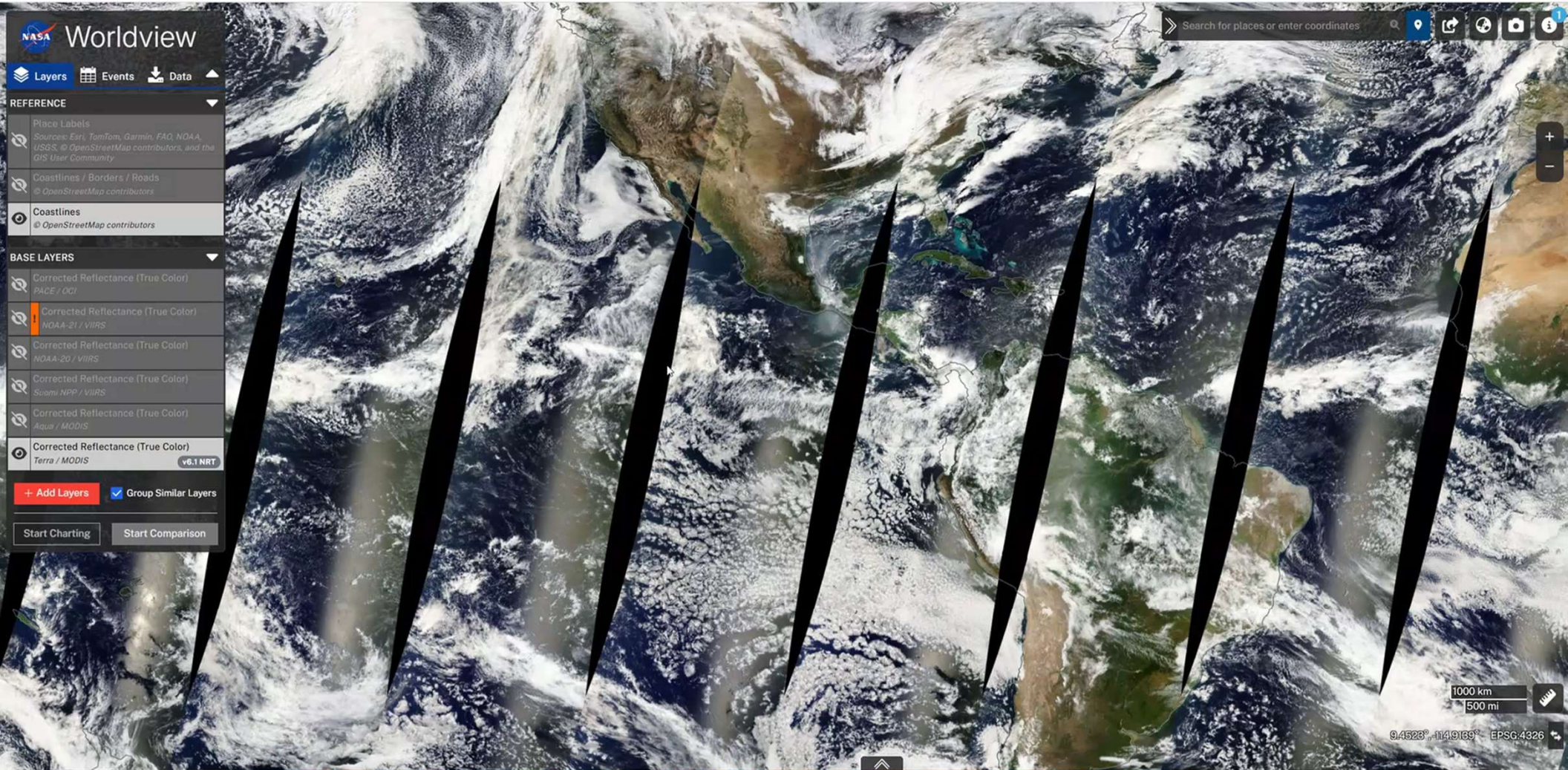
BASE LAYERS

- Corrected Reflectance (True Color)
PACE / OCI
- Corrected Reflectance (True Color)
NOAA-21 / VIIRS
- Corrected Reflectance (True Color)
NOAA-20 / VIIRS
- Corrected Reflectance (True Color)
Suomi NPP / VIIRS
- Corrected Reflectance (True Color)
Aqua / MODIS
- Corrected Reflectance (True Color)
Terra / MODIS **v6.1 NRT**

+ Add Layers Group Similar Layers

Start Charting Start Comparison

Search for places or enter coordinates



1000 km
500 mi

9.4523°, 114.9189° EPSG:4326

1 DAY

2025 NOV 09 < > ||

AUG 2025 SEP 2025 OCT 2025 NOV 2025

DAY