

# Data Access Services

*Noemi Marsico  
Earth Observation Data Engineer*

*5<sup>th</sup> September 2024*

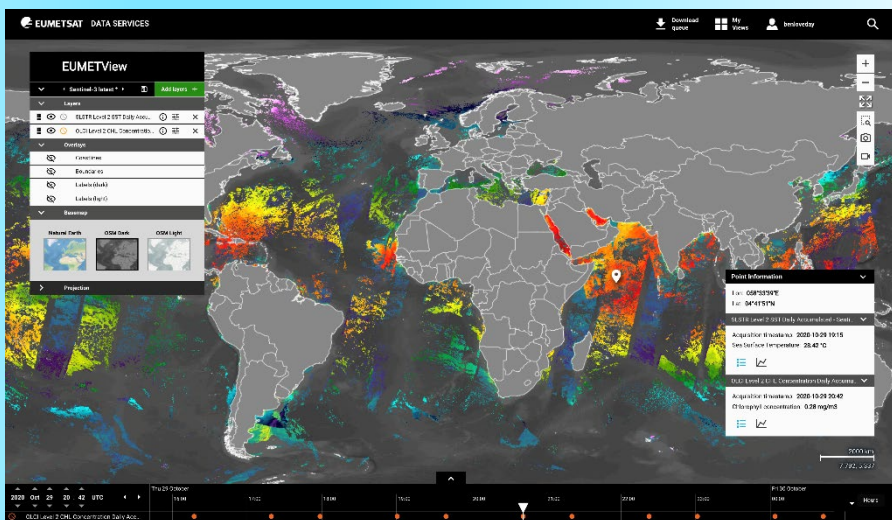




# EUMETSAT Pull Data Access Services

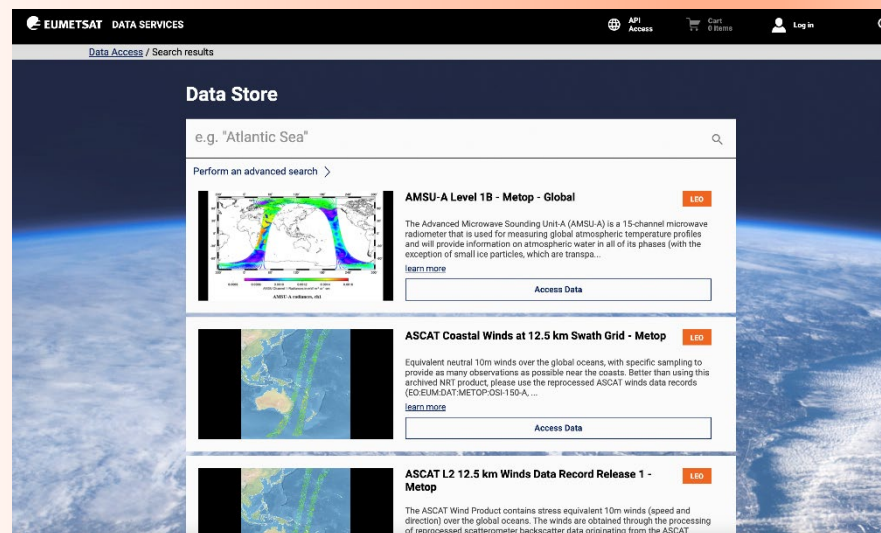
www.eumetsat.int

## EUMETView



<https://view.eumetsat.int/>

## Data Store



<https://data.eumetsat.int/>

## Data Tailor



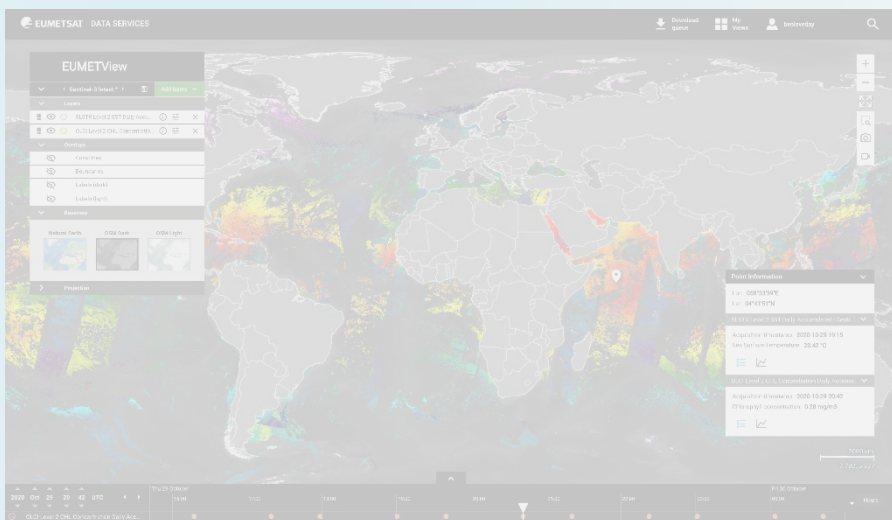
<https://tailor.eumetsat.int/>



# EUMETSAT Pull Data Access Services

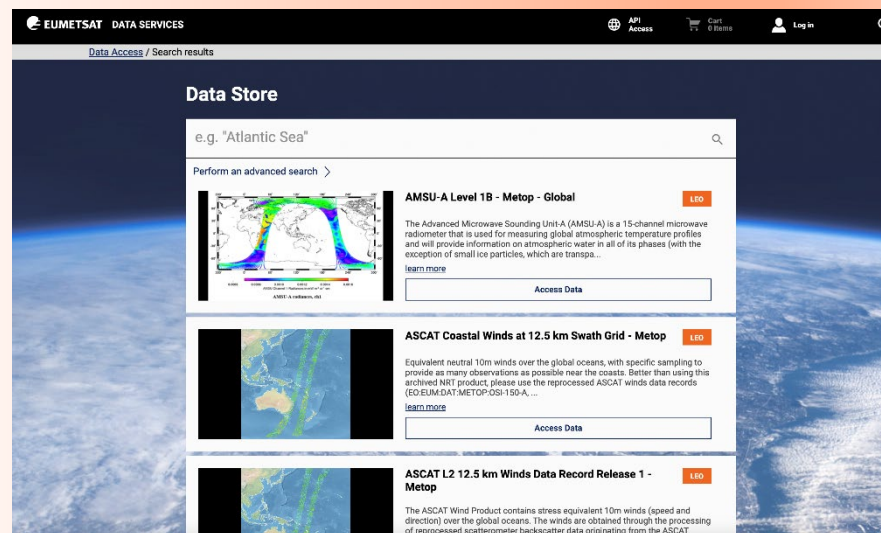
www.eumetsat.int

## EUMETView



<https://view.eumetsat.int/>

## Data Store



<https://data.eumetsat.int/>

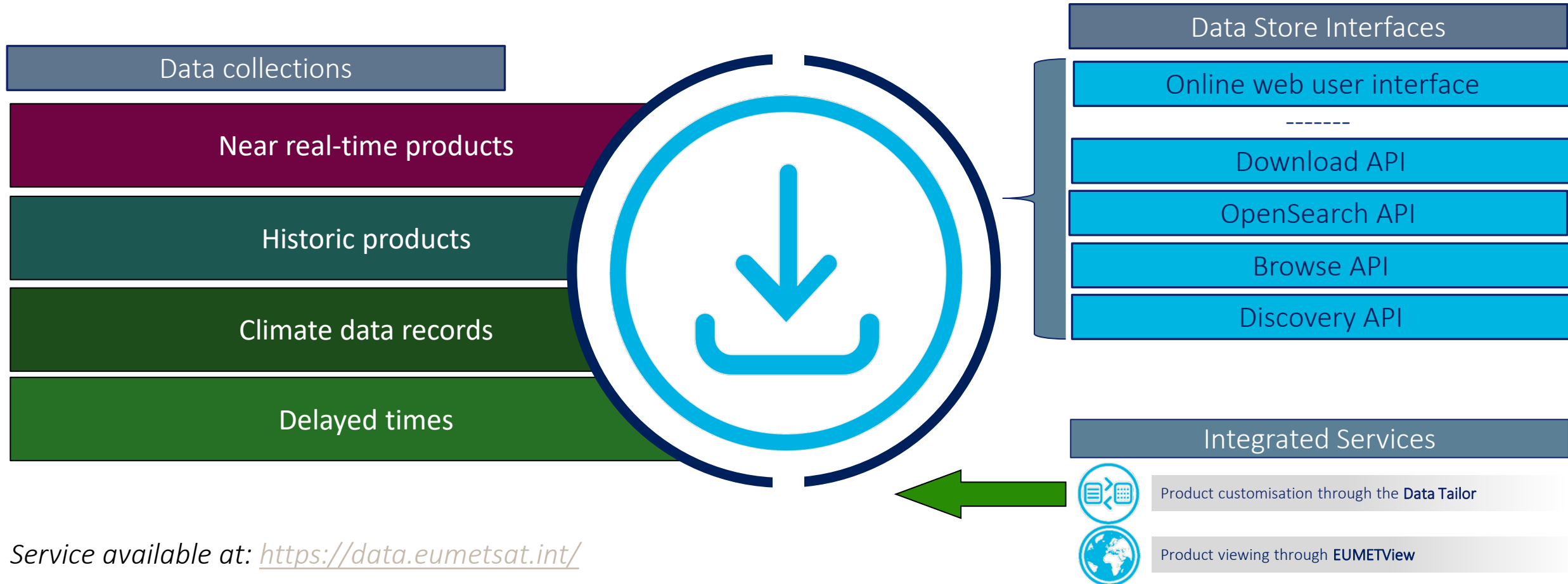
## Data Tailor



<https://tailor.eumetsat.int/>



The EUMETSAT Data Store provides users with a download and linked data tailoring service for online data; providing access through an online web user interface and via a suite of APIs.



Service available at: <https://data.eumetsat.int/>



# Ways of interacting with the Data Store APIs

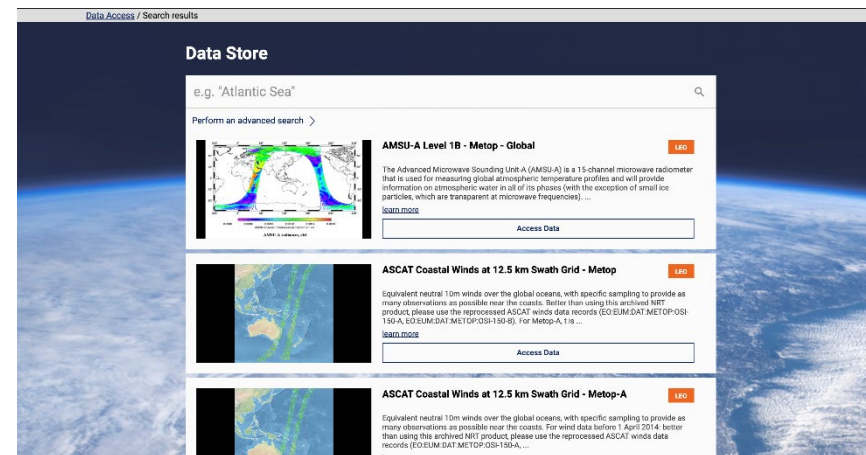
GUI



Graphical user interface



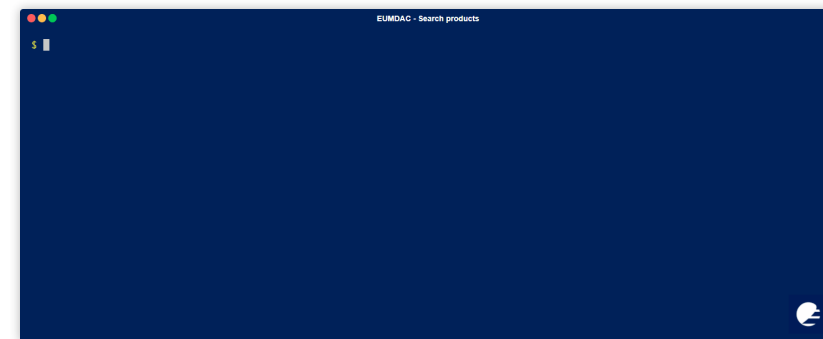
A graphical user interface (GUI) is a digital interface in which a user interacts with graphical components such as icons, buttons, and menus.



EUMDAC

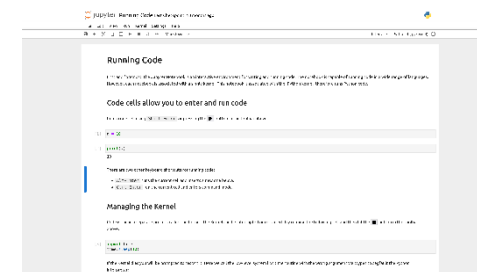
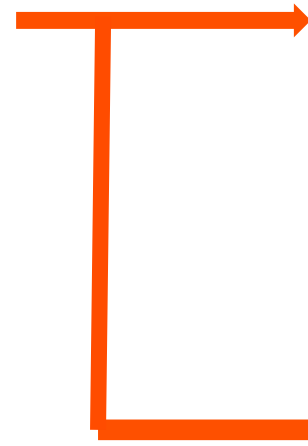


EUMETSAT Data Access Client



GUIDES

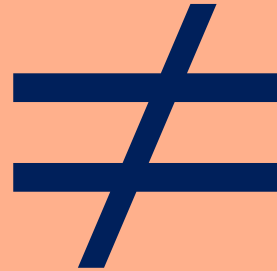
<https://user.eumetsat.int/resources/user-guides/introductory-data-store-user-guide>





**EUMDAC** is the **EUMETSAT Data Access Client**. It provides simple access to the EUMETSAT data from a variety of satellite missions. As a Python library, it comes with many methods and helpers to use EUMETSATs APIs and services, like Data Store and Data Tailor. It also provides a variety of useful command-line utilities for data search, download and processing.



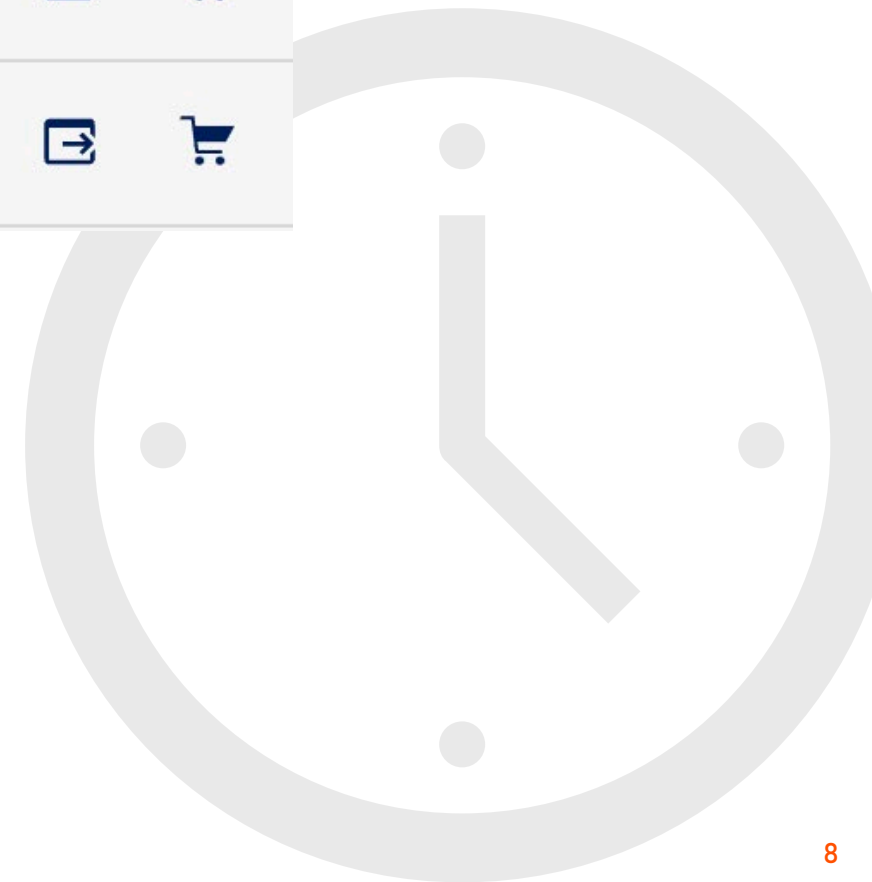


LI data from the Data Store Archive are different than on the EUMETCast



# Archived Time availability

<input type="checkbox"/>	2024-09-04 (10:50) - 2024-09-04 <b>(11:00)</b>	MTI1		0.41 MB			
<input type="checkbox"/>	2024-09-04 (10:40) - 2024-09-04 <b>(10:50)</b>	MTI1		0.39 MB			
<input type="checkbox"/>	2024-09-04 (10:30) - 2024-09-04 <b>(10:40)</b>	MTI1		0.36 MB			

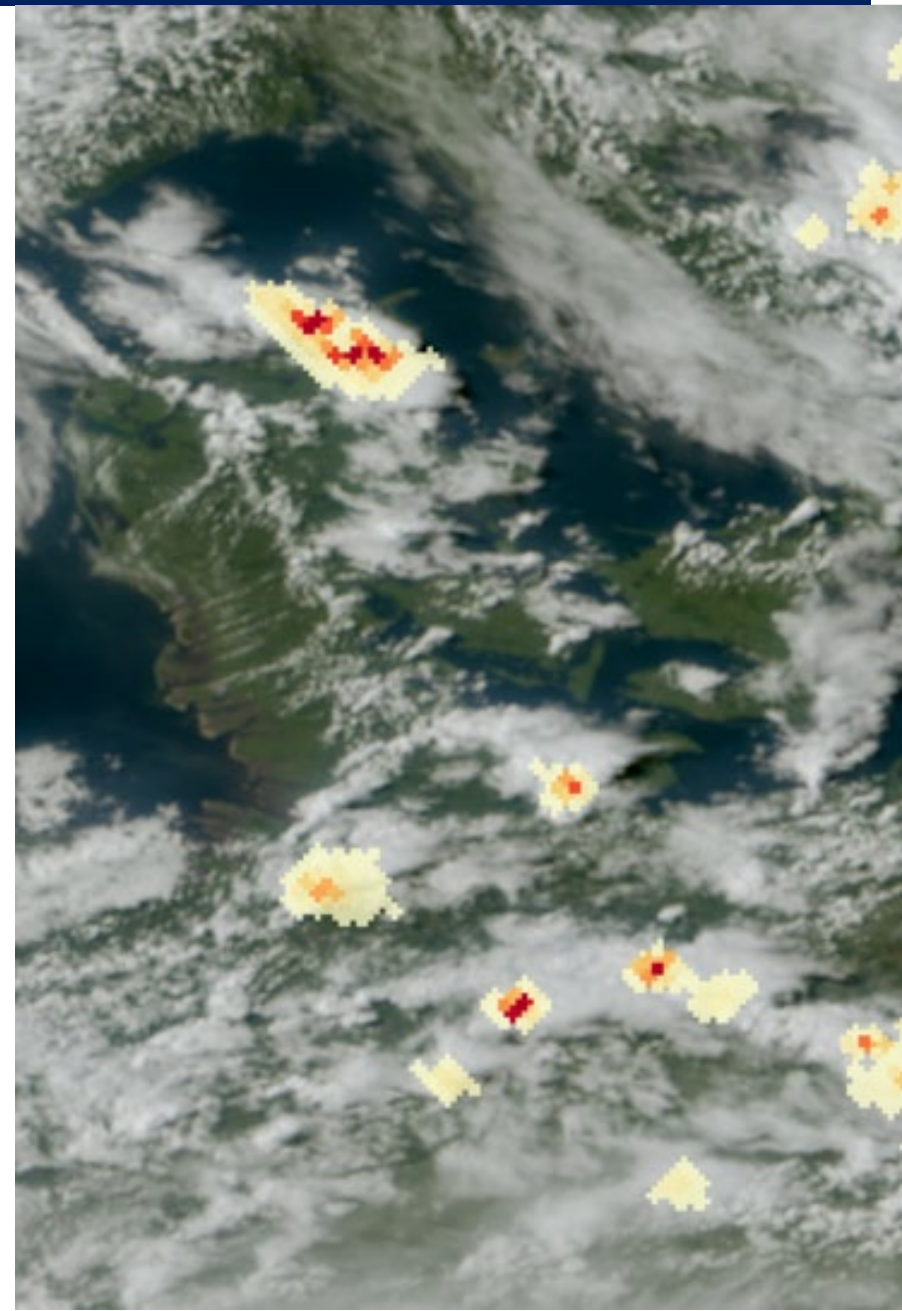






# LI collection in Data Store

Collection	ID
LI Lightning Groups - MTG - 0 degree	<a href="#">EO:EUM:DAT:0782</a>
LI Lightning Flashes - MTG - 0 degree	<a href="#">EO:EUM:DAT:0691</a>
LI Accumulated Flashes - MTG - 0 degree	<a href="#">EO:EUM:DAT:0686</a>
LI Accumulated Flash Area - MTG - 0 degree	<a href="#">EO:EUM:DAT:0687</a>
LI Accumulated Flash Radiance - MTG - 0 degree	<a href="#">EO:EUM:DAT:0688</a>
LI Lightning Events Filtered - MTG - 0 degree	<a href="#">EO:EUM:DAT:0690</a>



LI ✕**PLATFORM** ▼

- Sentinel-6 (9)
- Sentinel-3 (7)
- MTG (6)
- Metop (5)
- MSG (4)

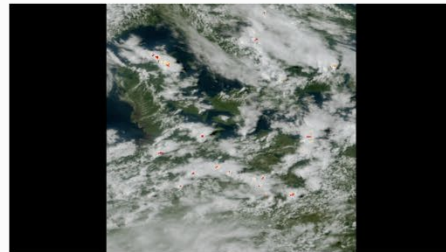
[Show remaining platforms \(2\)](#)**SENSOR TYPE** ▼

- Altimetric (12)
- Interferometer (2)
- Lightning Imager (6)
- Optical (10)
- Scatterometer (2)

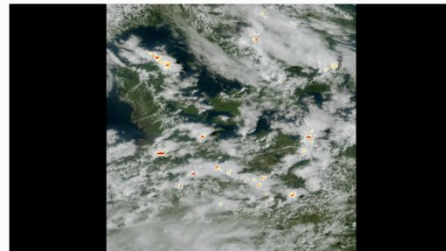
[Show remaining sensor type \(1\)](#)**SENSOR** ▼

- AMSU-A (1)
- ASCAT (2)
- IASI (2)
- LI (6)

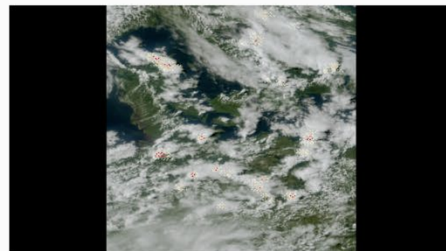
We've found 34 results

**LI Lightning Flashes - MTG - 0 degree** GEO

**LI** Level 2 **Lightning** Flashes (LFL) contains **LI** flashes. The definition of a flash is shared by **LI** and GLM; collections of groups that are correlated in space and time within the two windows of 330 milliseconds (temporal window) and 16.5km (space window), respectively. Even if the ...

[learn more](#)[Access Data](#)**LI Lightning Groups - MTG - 0 degree** GEO

**LI** Level 2 **Lightning** Groups (LGR) contains **LI** groups. These are closely related to other similar space-born instruments. The definition of a group is shared by **LI**, GLM and ISS-**LIS** groups: collections of pixel-based **lightning** events that are acquired within the ...

[learn more](#)[Access Data](#)**LI Lightning Events Filtered - MTG - 0 degree** GEO

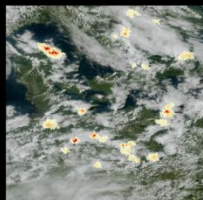
**LI** Level 2 **Lightning** Events Filtered (LEF) is one of the initial products, along with **Lightning** Flashes (LFL) and **Lightning** Groups (LGR), and provides the finest scale over which **LI** can monitor **lightning** activity. **Lightning** Flashes and ...

[learn more](#)[Access Data](#)



# Learn More option

[Data Access](#) / [Advanced search results](#) / Product details



**Status**  
Pre-operational

**Temporal extent**  
24/06/2024 to now

**Data policy**  
Free and unrestricted

**Processing level**  
Level 2 Data

**Region**

**Latitude**  
79 to 79 degrees

**Longitude**  
79 to 79 degrees

**Product Resolution**  
N/A

Last page update 16/08/2024

print product

provide feedback

## LI Accumulated Flashes - MTG - 0 degree

Publication date: 31/10/2022

### DESCRIPTION

LI Level 2 Accumulated Flashes (AF) complements the LI Level 2 Accumulated Flash Area (AFA) by providing one with the variation of the number of events within those regions reported to have lightning flashes in the Accumulated Flash Area (AFA). Accumulated Flashes provide users with data about the mapping of the number of LI events/detections rather than the mapping of flashes. One should keep in mind that the absolute value within each pixel of the Accumulated Flashes has no real physical meaning; it is rather a proxy for the pixel-by-pixel variation of the number of events. It is worth noting that one can derive the flash rate over a region encompassing a complete lightning feature (not within an FCI grid pixel) in Accumulated Flashes; this stems from the definition in Accumulated (gridded) data.

### ACCESS

By distribution      By format

netCDF4	Details
---------	---------

### RESOURCES

- [MTG LI level 2 data guide](#)
- [MTG Products Distribution Baseline \[MTGDIS\]](#)
- [Data Store MTG data access guide](#)
- [Accessing MTG LI Level 2 products](#)
- [Exploring MTG LI data](#)
- [MTG in operations](#)
- [MTG test data](#)

### CONTACT

#### Data Originator:

Organisation	EUMETSAT
Originating Centre	European Organisation for the Exploitation of Meteorological Satellites
URL	<a href="http://www.eumetsat.int">http://www.eumetsat.int</a>
E-Mail	ops@eumetsat.int
Telephone	+49(0)6151-807 3660/3770

Data Distributor: same as originator

### TECHNICAL DETAILS

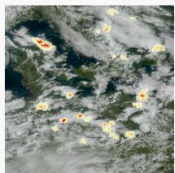
Platform	MTG
Orbit type	GEO
Sensor	LI
Sensor Type	Lightning Imager

### ADDITIONAL INFORMATION

Acronym	LI-2-AF
Collection type	Dataset
Collection ID	EO:EUM:DAT:0686
Parameter	Weather, Lightning, Level 2 Data
XML Metadata	<a href="#">download metadata</a>



## LI Accumulated Flashes - MTG - 0 degree



ID: EO:EUM:DAT:0686

Orbit: GEO

Data Policy:

[learn more](#)

AVAILABLE TIME RANGE: 2024-07-04 - 2024-09-04

2024-09-03

< 11:00 >

2024-09-04

< 11:00 >

### Filename

### Sort by

Sensing time

Descending

Filters

Reset Filters

Show Results

1-20 of 145 products found

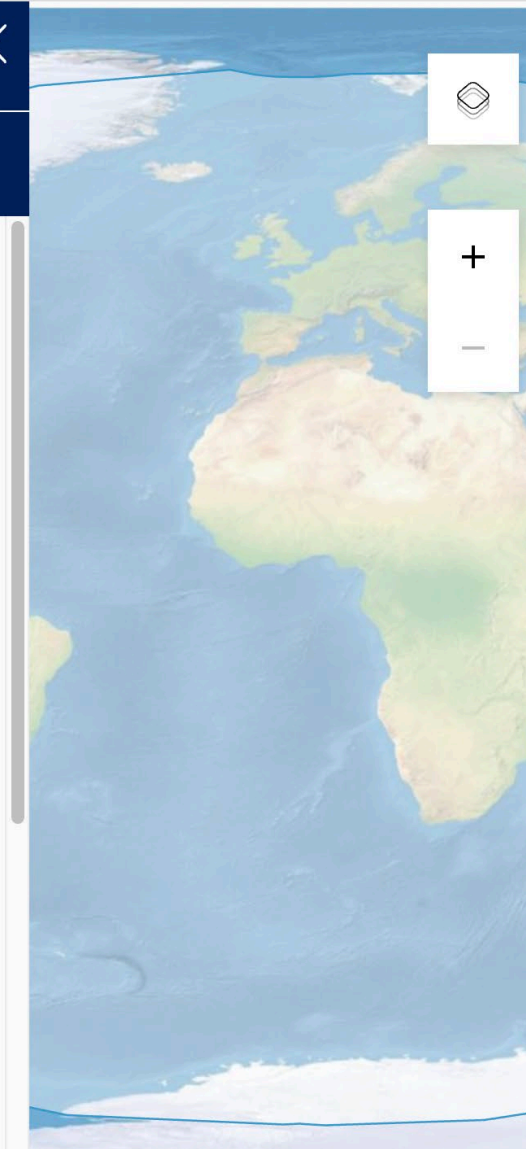
1 2 ... 8 >

Select all in page

Add selected to Cart

Add Results to Cart

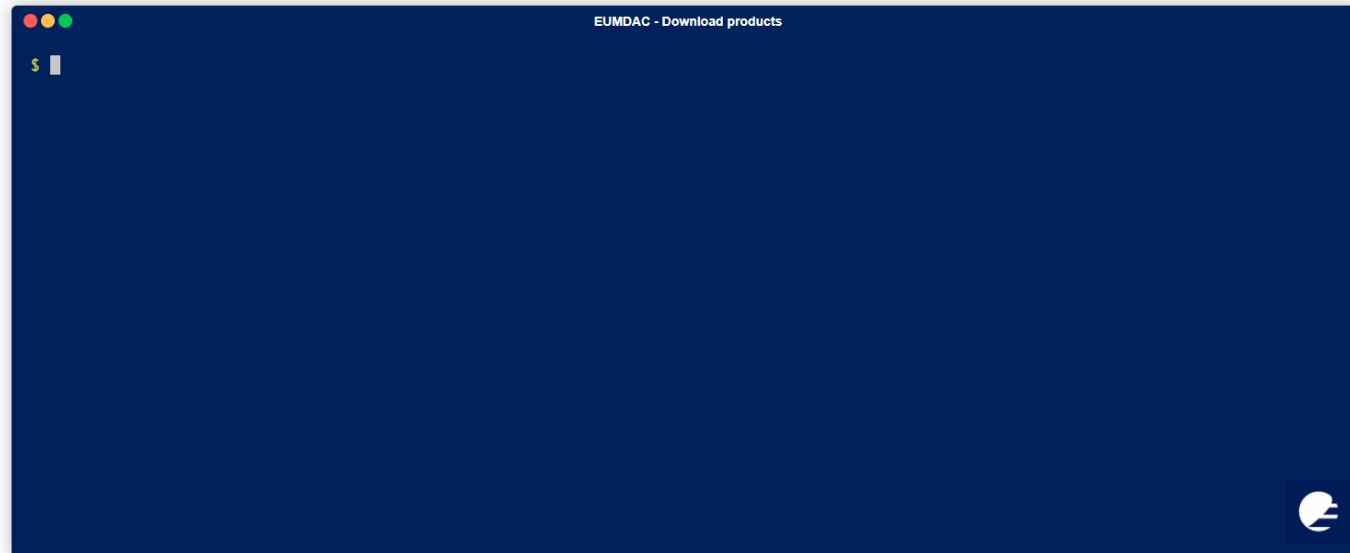
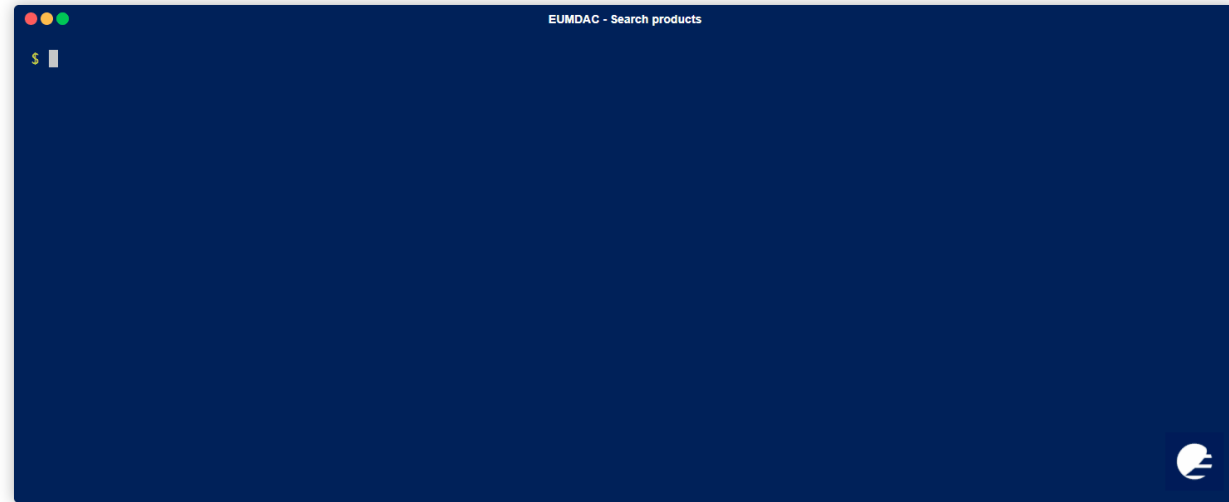
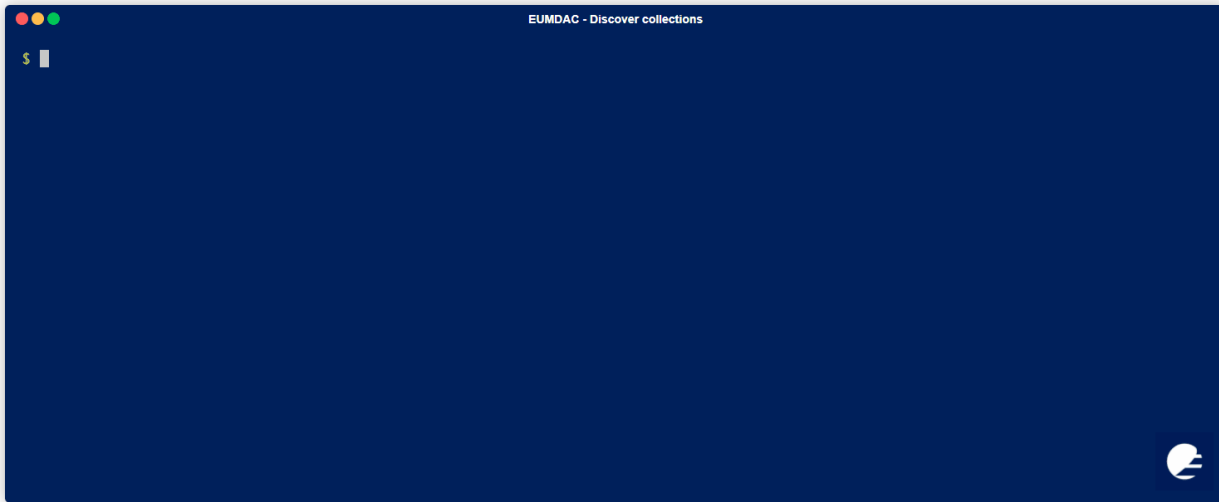
<input type="checkbox"/>	2024-09-04 (10:50) - 2024-09-04 (11:00)	MT11		0.41 MB			
<input type="checkbox"/>	2024-09-04 (10:40) - 2024-09-04 (10:50)	MT11		0.39 MB			
<input type="checkbox"/>	2024-09-04 (10:30) - 2024-09-04 (10:40)	MT11		0.36 MB			
<input type="checkbox"/>	2024-09-04 (10:20) - 2024-09-04 (10:30)	MT11		0.36 MB			
<input type="checkbox"/>	2024-09-04 (10:10) - 2024-09-04 (10:20)	MT11		0.32 MB			
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<input type="checkbox"/>	2024-09-04 (09:00) - 2024-09-04 (09:10)	MT11		0.23 MB			





# EUMETSAT Data Access Client (EUMDAC)

[www.eumetsat.int](http://www.eumetsat.int)





# Structure of the products

Collection	ID	Structure
LI Lightning Groups - MTG - 0 degree	<u>EO:EUM:DAT:0782</u>	EOP Metadata.xml (Metadata) manifest.xml (Metadata) One BODY file (NetCDF4 Datafile) One TRAIL file (NetCDF4 Datafile) One JPEG image (Quicklook image for Data Store browsing purposes) quicklooks/One PNG image (Quicklook image)

Name	Date Modified	Size
W_XX-EUMETSAT-Darmstadt,IMG+SAT,MTI1+LI-2-LGR--FD--CHK-BODY--ARC-NC4E...240904113018_L2PF_OPE_20240904112007_20240904113007_N__T_0069_0001.nc	Today at 11:31	
W_XX-EUMETSAT-Darmstadt,IMG+SAT,MTI1+LI-2-LGR--FD--CHK-TRAIL--ARC-NC4E...240904113020_L2PF_OPE_20240904112007_20240904113007_N__T_0069_0002.nc	Today at 11:31	
W_XX-EUMETSAT-Darmstadt,IMG+SAT,MTI1+LI-2-LGR--FD--QCK-IMAGE--ARC-PNG...240904113018_L2PF_OPE_20240904112007_20240904113007_N__T_0069_0001.jpg	Today at 11:31	
W_XX-EUMETSAT-Darmstadt,IMG+SAT,MTI1+LI-2-LGR--FD--QCK-IMAGE--ARC-PNG...40904113018_L2PF_OPE_20240904112007_20240904113007_N__T_0069_0001.png	Today at 11:31	
EOPMetadata.xml	Today at 11:31	
manifest.xml	Today at 11:31	



The screenshot shows the EUMETSAT User Portal interface. On the left is a dark blue navigation sidebar with links for Dashboard, Data catalogue, Using data, Data access, and News & events. At the bottom of the sidebar is a link to 'Go to EUMETSAT website'. The main content area has a search bar at the top right. The article title is 'Data Store MTG data access guide' with a version 'V1.3, 18 Jul 2024'. The text describes a comprehensive guide for accessing level 2 data from the Lightning Imager (LI) sensor on the Meteosat Third Generation (MTG) satellite. It includes a table of available LI collections and a section titled 'Accessing the LI collections' which lists various methods like User Interface (UI), API, and EUMETSAT Data Store.

Collection	ID
LI Lightning Groups - MTG - 0 degree	<a href="#">EO-EUM.DAT:0782</a>
LI Lightning Flashes - MTG - 0 degree	<a href="#">EO-EUM.DAT:0691</a>
LI Accumulated Flashes - MTG - 0 degree	<a href="#">EO-EUM.DAT:0686</a>
LI Accumulated Flash Area - MTG - 0 degree	<a href="#">EO-EUM.DAT:0687</a>
LI Accumulated Flash Radiance - MTG - 0 degree	<a href="#">EO-EUM.DAT:0688</a>
LI Lightning Events Filtered - MTG - 0 degree	<a href="#">EO-EUM.DAT:0690</a>

Navigate this article  
Accessing the LI collections  
Using the EUMETSAT Data Store  
Data Store User Interface (UI)  
EUMETSAT Data Access Client (EUMDAC)  
EUMDAC Command Line Interface (CLI)  
EUMDAC Python Library  
FAQ  
Related resources

Navigate this article  
Accessing the LI collections  
Using the EUMETSAT Data Store  
Data Store User Interface (UI)  
EUMETSAT Data Access Client (EUMDAC)  
EUMDAC Command Line Interface (CLI)  
EUMDAC Python Library  
FAQ  
Related resources

<https://user.eumetsat.int/resources/user-guides/mtg-data-access-guide>



Home Page - Select or create a notebook | 1\_6\_MTG\_LI\_data\_access - Jupyter Notebook

jupyter 1\_6\_MTG\_LI\_data\_access Last Checkpoint: a few seconds ago (unsaved changes) [Python 3 (ipykernel)] [Logout]

File Edit View Insert Cell Kernel Widgets Help | Not Trusted | Python 3 (ipykernel)

Run [Markdown]

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[← Index](#) | [← Accessing MTG FCI products](#) | [Using the EUMETSAT Data Tailor with EUMDAC →](#)

## Accessing MTG LI Level 2 products

### Data used

Product Description	Data Store collection ID	Data Store
LI Accumulated Flashes - MTG - 0 degree	EO:EUM:DAT:0686	<a href="#">link</a>
LI Accumulated Flash Area - MTG - 0 degree	EO:EUM:DAT:0687	<a href="#">link</a>
LI Accumulated Flash Radiance - MTG - 0 degree	EO:EUM:DAT:0688	<a href="#">link</a>
LI Lightning Events - MTG - 0 degree	EO:EUM:DAT:0690	<a href="#">link</a>
LI Lightning Flashes - MTG - 0 degree	EO:EUM:DAT:0691	<a href="#">link</a>
Lightning groups, full disc coverage - MTG	EO:EUM:DAT:0782	<a href="#">link</a>

### Learning outcomes

At the end of this notebook you will know;

- How to refine your **searches** for MTG LI products in the EUMETSAT Data Store using the `eumdac` API client
- How to **download** products from your refined search results
- How to **convert** products into CSV format



[https://gitlab.eumetsat.int/eumetlab/data-services/eumdac\\_data\\_store/-/blob/master/1\\_6\\_MTG\\_LI\\_data\\_access.ipynb](https://gitlab.eumetsat.int/eumetlab/data-services/eumdac_data_store/-/blob/master/1_6_MTG_LI_data_access.ipynb)





***Thank you!!***