*New ways to access **Copernicus altimetry** data from **EUMETSAT**. Have you tried the **Data Store**?*

Copernicus Marine Training Service
OSTST, Venice, 10.2022

Accessing Sentinel-6 and Sentinel-3 altimetry data through EUMETSAT big data services

INTRODUCTION

- In September 2022, EUMETSAT **retired** the **CODA** and **CODAREP** services used to disseminate level-1 and level-2 Sentinel-3 marine data for **SRAL**.
- The new **EUMETSAT Data Store** service has replaced these, expanding data access (Figure 1).
- **Sentinel-6 reprocessing** is also available, with **operational collections** (NRT/STC/NTC) coming in Q1 2023.
- New tools (e.g. **EUMDAC**) and training material are available to support users in the transition.

NEW SERVICES: KEY CAPABILITIES

- The **EUMETSAT Data Store** will offer unified access to operational (OPE) and reprocessed (REP) data.
- A longer rolling archive will connect OPE and REP timelines, minimising/removing the need to use the offline **EUMETSAT Data Centre**.
- The **EUMETSAT Data Store** will replace/minimise the need for rolling archive based sFTP services.
- "On-the-fly" customisation of products via the **Data Tailor**, already available for many EUMETSAT products, under consideration SAFE format products.

USING THE SERVICES

- Access to the Data Store is via GUI and a suite of REST APIs, to support automation and batching (Figure 2).
- To support API use, we have authored the EUMETSAT Data Access Client (**EUMDAC**).
- EUMDAC is available as a **python library** or as a **command line interface** and greatly simplifies data access and retrieval.
- Future EUMDAC versions will consider support for Sentinel interfaces with the **Data Tailor.**

USE CASE EXAMPLES

- "I want to support altimetry research validation activities by downloading regional timeseries"
- "I need the latest products, with minimal latency, but I do not have EUMETCAST access"
- "I want to see training material related to new SRAL and Sentinel-6 data access"

Figure 1: Changes in EUMETSAT data services for marine users in 2022

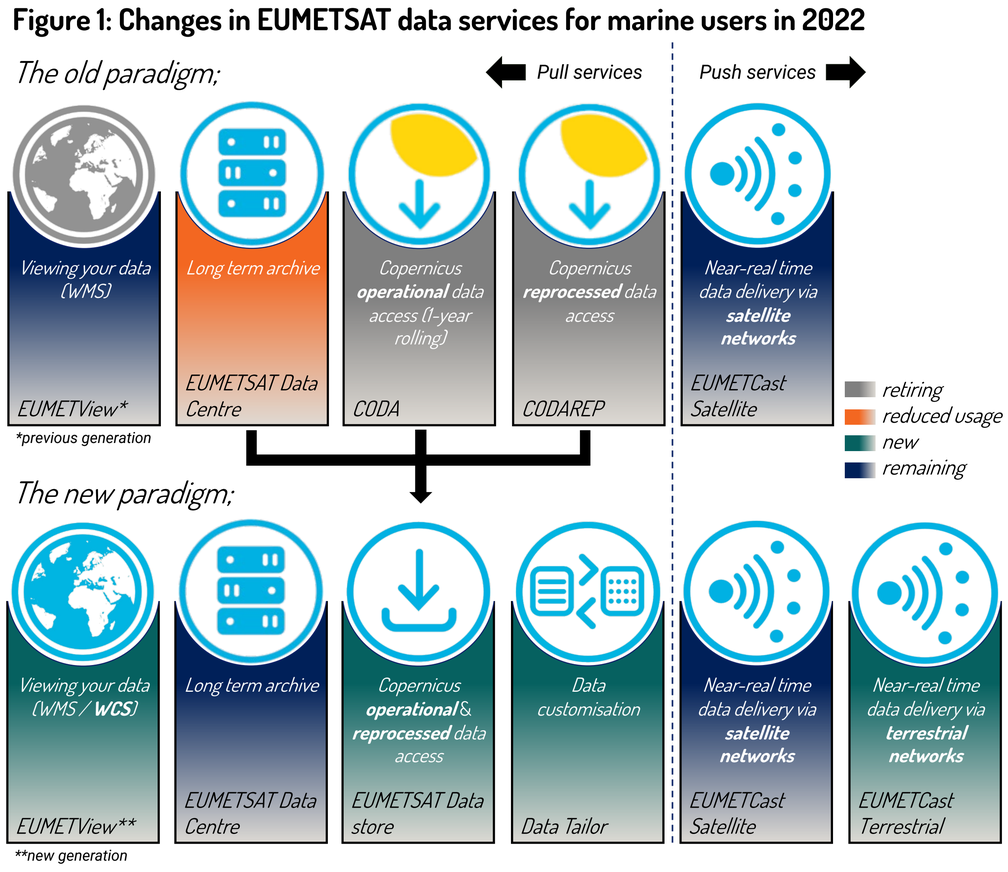
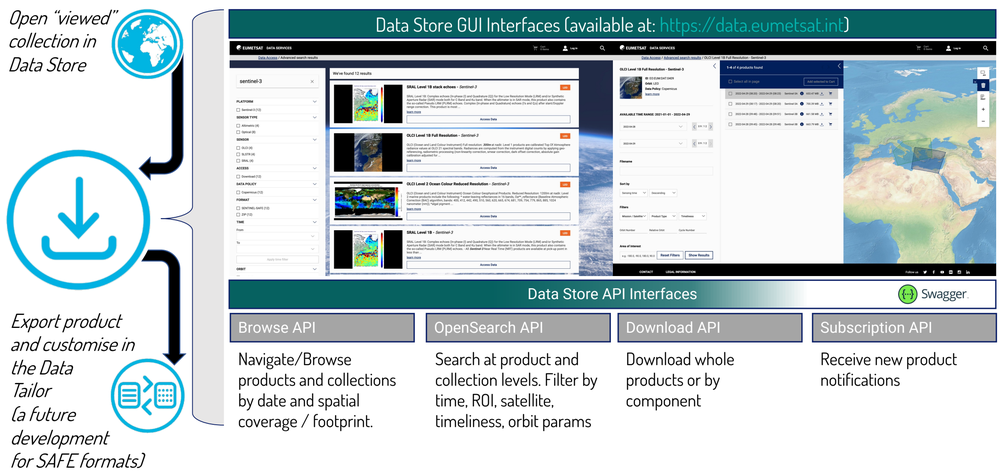


Figure 2: EUMETSAT Data Store interfaces



→ Data Store supports regional- and orbit parameter-based searches for altimetry products. EUMDAC facilitates this process.

→ With the subscription service, you will be notified of any new products in a collection of interest. This can be used to trigger downloading.

→ Our training material includes many examples of searching and download queries for altimetry products using EUMDAC

GET STARTED NOW →

In more detail...

Come see the live Data Store demos at 17:45 on 01.11 (Tuesday) and 14:45 on 03.11 (Thursday)

CURRENTLY AVAILABLE MARINE COLLECTIONS

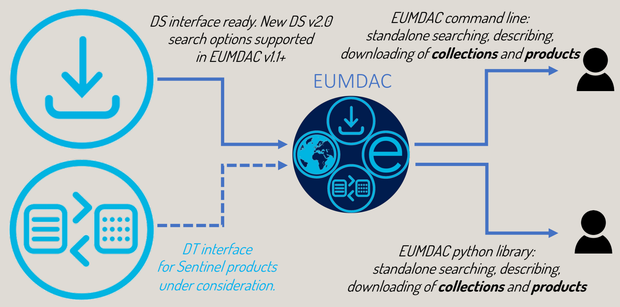
Collection	Description	Date start
EO:EUM:DAT:0407	OLCI Level 2 Ocean Colour Full Res (OPE)	2021-01-01
EO:EUM:DAT:0408	OLCI Level 2 Ocean Colour Reduced Res (OPE)	2021-01-01
EO:EUM:DAT:0556	OLCI Level 2 Ocean Colour Full Res (REP:BC003)	2016-04-25
EO:EUM:DAT:0557	OLCI Level 2 Ocean Colour Reduced Res (REP:BC003)	2016-04-25
EO:EUM:DAT:0409	OLCI Level 1B Full Res (OPE)	2021-01-01
EO:EUM:DAT:0410	OLCI Level 1B Reduced Res (OPE)	2021-01-01
EO:EUM:DAT:0577	OLCI Level 1B Full Res (REP:BC002)	2016-04-25
EO:EUM:DAT:0578	OLCI Level 1B Reduced Res (REP:BC002)	2016-04-25
EO:EUM:DAT:0412	SLSTR Level 2 Sea Surface Temperature (OPE)	2021-01-01
EO:EUM:DAT:0582	SLSTR Level 2 Sea Surface Temperature (REP:BC003)	2016-09-14
EO:EUM:DAT:0411	SLSTR Level 1B Radiances & BTs (OPE)	2021-01-01
EO:EUM:DAT:0581	SLSTR Level 1B Radiances & BTs (REP:BC003)	2016-09-14
EO:EUM:DAT:0415	SRAL Level 2 Altimetry Global (OPE)	2021-01-08
EO:EUM:DAT:0586	SRAL Level 2 Altimetry Global (REP:BC004)	2016-03-01
EO:EUM:DAT:0406	SRAL Level 1B (OPE)	2021-01-08
EO:EUM:DAT:0584	SRAL Level 1B (REP:BC004)*	2016-03-01
EO:EUM:DAT:0414	SRAL Level 1B Stack Echoes (OPE)	2021-01-08
EO:EUM:DAT:0585	SRAL Level 1B Stack Echoes (REP:BC004)	2016-03-01
EO:EUM:DAT:0413	SRAL Level 1A Complex Echoes (OPE)	2021-01-08
EO:EUM:DAT:0583	SRAL Level 1A Complex Echoes (REP:BC004)	2016-03-01
EO:EUM:DAT:0240	Poseidon-4 Level 2 HR (REP: F06)	2020-12-17
EO:EUM:DAT:0239	Poseidon-4 Level 2 LR (REP: F06)	2020-12-17
EO:EUM:DAT:0238	Poseidon-4 Level 1B HR (REP: F06)	2020-12-17
EO:EUM:DAT:0237	Poseidon-4 Level 1B LR (REP: F06)	2020-12-17
EO:EUM:DAT:0236	Poseidon-4 Level 1A HR (REP: F06)	2020-12-17

SEARCHING BY PARAMATER

Parameter	S3 search method	S3 search method
Relative Orbit number (Or)	direct from API	direct from API
Absolute Orbit number start (Oa)	direct from API	direct from API
Cycle number (C)	direct from API	direct from API
Relative pass number (Pr)	from file name (*<Pr>_EUM*) where <Pr> is zero padded 3 digit string.	Not currently possible
Absolute pass number (Pa)	by calculation: C = int((Pa + Po + Pc)/Pc) Pr = Pa – (C-1)*Pc + Po C from API Pr from file name	Not currently possible

Passes per cycle (Pc): 254, Pass offset (Po): 102

EUMDAC DEVELOPMENTS



EXAMPLES OF EUMDAC USAGE

To get eumdac: *conda install -c eumetsat eumdac*
To set up eumdac: *eumdac --credentials ConsumerKey ConsumerSecret*
To see what collections are available: *eumdac describe*
To see info on a given collection: *eumdac describe –c EO:EUM:DAT:0408*
To search for products (in a given region/time):
eumdac search -c EO:EUMVAL:DAT:0415
--geometry 'POLYGON ((10.09 56.09, 10.34 56.09, 10.34 56.19, 10.09 56.19, 10.09 56.09))'
-s 2022-04-01 -e 2022-04-06 > products.txt
To download your products:
eumdac download -c EO:EUM:DAT:0415 -p @products.txt
To subscribe to this collection:
eumdac subscribe -c EO:EUM:DAT:0415 -url https://your_listening_service

TRAINING MATERIALS AND MORE INFORMATION

EUMETSAT gitlab repository
https://gitlab.eumetsat.int/eumetlab/oceans/ocean-training

EUMETSAT knowledge bases
https://eumetsatspace.atlassian.net/wiki/spaces/EUM/overview

EUMETSAT training calendar
https://trainingevents.eumetsat.int/trui/

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