

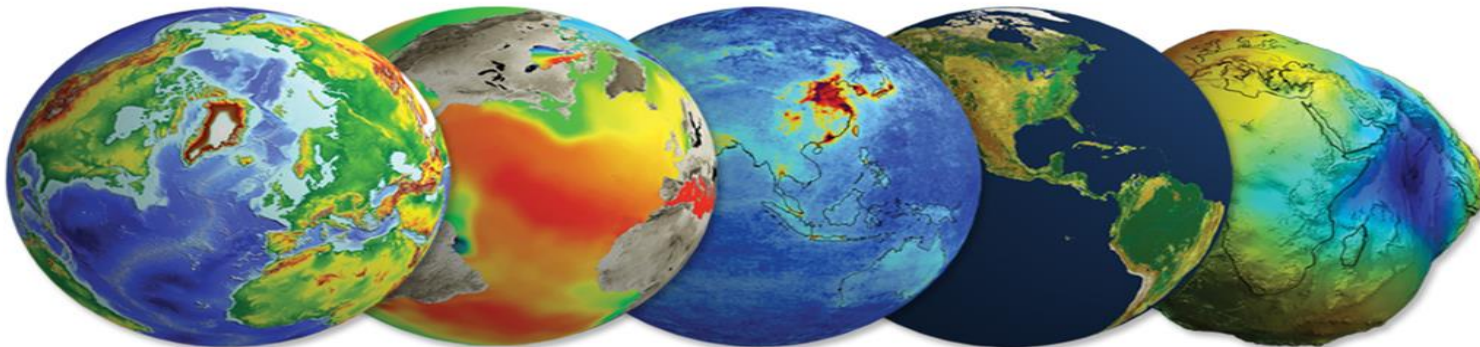
# Access to ESA EO & Copernicus Sentinel Data

## Presenter: F. Sarti, ESA / EOP



### Presentation Overview

1. Data Policy ( ESA ERS, Envisat, EarthExplorers and Copernicus Sentinels)
2. ESA Data access (*ENVISAT and ERS archives and Earth Explorers*)
  1. EO-SSO registration
  2. My Online data access (Free dataset)
  3. Access to Restrained dataset (OTF)
3. Sentinel Data access (*Sentinel-1*)
  1. Use typologies (focusing on scientific users)
  2. Sentinel data hub (registration, search and download)
4. Third Party Missions scheme
5. Important Websites (PI Community, Sentinel online, SEOM)





**ERS and Envisat**



**Earth Explorers**

**Revised ESA Earth Observation Data Policy**  
**ESA/PB-EO(2010)54**

- Free datasets (for all data available on Internet)
- Restrained datasets (in case of technical or financial constraints)



**Sentinels**

**Copernicus (GMES ) Data Policy,**  
**Joint Principles for Sentinel Data Policy**  
**[ESA/PB-EO(2013)30, rev.1]**

- Free, full and open data policy

## ESA Data Policy for ERS, Envisat and ESA Earth Explorers Missions

- ❑ to stimulate a balanced development of Science, Public Utility and Commercial Applications, consistent with the mission objectives
- ❑ to maximize the beneficial use of data from ESA EO satellites
- ❑ All data are free of charge
- ❑ Since summer 2016 most of the data, including SA/ASAR (apart from level 0) can be obtained and accessed via quick registration!

<https://earth.esa.int/web/guest/data-access/how-to-access-eo-data/asar-otf>

The main change is that now also for SAR / ASAR data:

- all Level 1 data require just a fast registration (up to 5 data per day): “free dataset”
- Whereas only Level 0 (or Level 1 if more than 5 products per day are needed) require submitting a full proposal

N.B. all data (level 1, level 0) are however free of charge

# ESA Earth Observation Data Policy



Earth Online

Login My Earthnet

Register

Google™ Custom Search



Need Help? [Contact here](#)

European Space Agency

Data Access ▾

Missions ▾

Earth Topics ▾

PI Community ▾

Explore more... ▾

You are here [Home](#) > [Data Access](#) > [How to Access EO Data](#)

[Follow](#) | [Share](#) | [f](#) [t](#) [g+](#) [e](#)

## How to Obtain (A)SAR OTF Data

(A)SAR On The Fly data products are freely available to ESA registered users via the [EOLI-SA client](#).

Users can search and browse all products openly, but a registration on the ESA EO Data Portal is order required to download.

In order to register and to be granted access to the available products, users are required to follow the steps below:

- Create an EO-SSO account following the [instructions](#) (for users who have not registered already).
- Apply for (A)SAR OTF Data:
  - **Level 1 (ASAR IMS, ASAR IMP)**  
Users can access the (A)SAR OTF Standard Service (Level 1 Data products) by submitting a [Fast Registration](#).  
Access will be automatically enabled at registration submission. Users will receive an email containing access details.
  - **Level 0 (ASAR IM)**  
Users can access (A)SAR OTF L0 Data products by submitting a [Data Service Request](#) justifying and describing the data needs.  
Please note that access to Level 0 data is not part of the standard OTF Service and it will be granted only in exceptional cases. Requests will be evaluated and feedback will be provided usually within 2 weeks.

The service is being rolled out gradually. ASAR IM will be available from July 2016, ASAR AP from September 2016, ASAR WS from December 2016, and ERS IM from Q1 2017.

For any additional inquiries, please refer to the [\(A\)SAR OTF FAQ page](#) or contact EOHelp at [eohelp@esa.int](mailto:eohelp@esa.int)

## Data Access

- Data Access Home
- Browse Data Products
- Latest Data Products
- Products Typology
- Data Product News
- Online Archives
- Catalogue Access
- Sample Data
- Auxiliary Data
- How ESA processes Data
- How ESA delivers Data
- How to Access EO Data**
  - EO data distributed by ESA
  - How to access data online
  - How to access Copernicus data
- How to Access EO Campaign Data
- Helpdesk
- Help

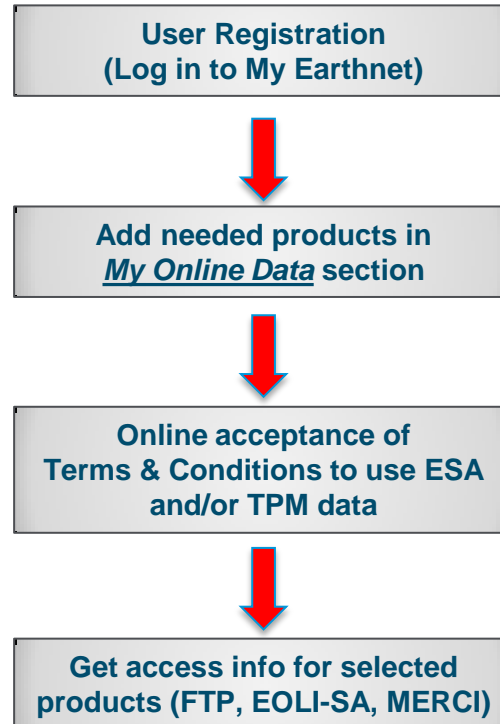
<https://earth.esa.int/web/guest/data-access/how-to-access-eo-data/asar-otf>

European Space Agency

# Accessing “free” datasets (i.e. quick registration)



## Free Dataset



DATA Collections -> <https://earth.esa.int/web/guest/eoli>

# My Online Data (Free Dataset) Access



The access to the selected Online data, is provided by ESA EO Help & Order Desk. They will address you to the appropriate system providing direct access to EO data for download via internet

merci version 0.8.0 - user

[Home](#) | [Query Products](#) | [Query Sites](#) | [Change Password](#) | [Logout](#) | [Help](#)

### Query Products

**Region**

User Defined   
Rectangle

North Lat.   
South Lat.   
West Lon.   
East Lon.

**Time Range**

Start date    
End date

**Type Info**

Product Type   
Subset

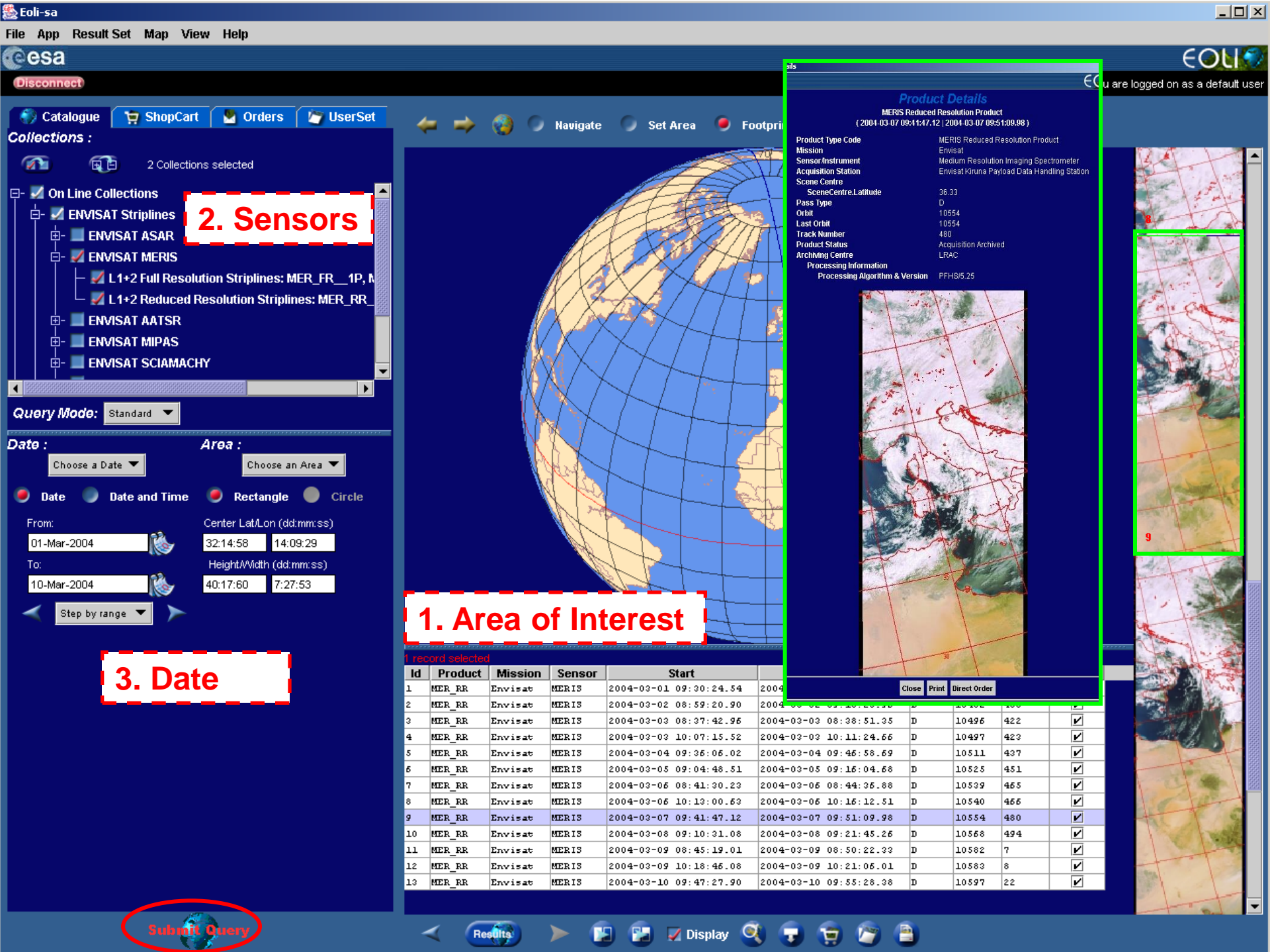
**Geographical interface for MERIS RR / (A)ATSR archived products**

**e.g. download for Proba archived products**

[New Query](#)

Query Mode:   
Date :  Area :







## Copernicus Data Policy for Sentinels Missions

- ❑ The Copernicus data policy is adopted via a Delegated Regulation
- ❑ This policy promotes the access, use and sharing of Copernicus information and data on a full, free and open basis
- ❑ One of the main objectives is to support downstream segment and research, technology and innovation communities
- ❑ The European research institutes will be able to make the best use of these data to create innovative applications and services

**Sentinel Data Policy = full and open access  
to Sentinel data to all users**

### In practical terms

- Anybody can (has the right to) access acquired Sentinel data
- Licenses for the Sentinel data are free of charge
- Online access with users registration including acceptance of T&C\*

*\*TERMS AND CONDITIONS FOR THE USE AND DISTRIBUTION OF SENTINEL DATA  
available online on the Sentinel website*

*([https://sentinel.esa.int/documents/247904/690755/TC\\_Sentinel\\_Data\\_31072014.pdf](https://sentinel.esa.int/documents/247904/690755/TC_Sentinel_Data_31072014.pdf))*

# Sentinel data access for Scientific users- (Sentinel Data Hub)



The free, full and open data policy adopted for the Copernicus programme foresees access available to all users for the Sentinel data products, via a simple registration.

Users can register and download Sentinel-1 data from the online Sentinel Data Hub (<https://scihub.copernicus.eu/>)

Anyone can register online via self-registration. The self-registration process is automatic and immediate. Registration grants access rights for searching and downloading Sentinel-1 products. Sentinel-1 products are available at no cost for anybody. The data available through the Data Hub is governed by the Terms and Conditions of the use and distribution of Sentinel data, which the User is deemed to have accepted by using the Sentinel data.

The S-1 Scientific data Hub [Rolling Archive maintains the latest 2 months of products for download via HTTP.](#)

More technical [https:// scihub.copernicus.eu /userguide/](https://scihub.copernicus.eu/userguide/)

# Sentinel Data Hub (1/4)



From October 2014 first Copernicus satellite Sentinel-1A is operational (data available to all users via Sentinel data hub). Sentinel-2A data are available to users from December 2015.

Sentinel-1B data expected to be released to users from October 2016 and Sentinel-3 data from summer 2016.

...Click on  
“Scientific Hub”

https://scihub.copernicus.eu

Suggested Sites

Copernicus Sentinels Scientific Data Hub

esa

Welcome to the Sentinels Scientific/Other use Data Hub

The Sentinels Scientific Data Hub provides complete, free and open access to Sentinel-1 and Sentinel-2 user products, starting from the In-Orbit Commissioning Review (IOCR).

Scientific Hub API Hub S-2 PreOpsHub User Guide Roadmap

Access Points

**Scientific Hub** : access point for all sentinel mission with access to the interactive graphical user interface.  
**API Hub** : access point for API users with no graphical interface. All API users regularly downloading the latest data are encouraged to use this access point for a better performance.  
**Sentinel-2 Pre-operational Hub** : pre-operational access point for all users to Sentinel-2 data. Login credentials are guest : guest .

For more details or request of help support please send an e-mail to [eosupport@copernicus.esa.int](mailto:eosupport@copernicus.esa.int)

Statistics

# Sentinel Data Hub overview and registration (2/4)



1) If you are already registered log in to start using the Sentinel Hub geographic interface to browse and download Sentinel data, if you are a new user click on the circled red link “Are you interested entering Sentinel Data Hub system?” to complete registration

**Sentinel-1 Scientific Data Hub**

European Commission

Overview About

username:  password:

Forgot your password?

### Overview

The Sentinel Data Hub is a web based system designed to provide EO data users with distributed mirror archives and bulk dissemination capabilities for the Sentinel-1 products.

Detailed information on Sentinel-1 products and Data Access mechanisms is available at <https://sentinel.esa.int/web/sentinel/sentinel-data-access>

References:

- <http://www.copernicus.eu/>
- <https://sentinel.esa.int/>

For a brief guide to the Sentinel Data Hub please click here.

*Some users have experienced problems while using IE9 (e.g. self-registration). This issue will be fixed in the enhanced web version of the Data Hub. For the time being we suggest using alternative browsers (IE10 or 11, Chrome, Firefox, Safari)*

**Are you interested entering Sentinel Data Hub system?**

**Sentinel-1 Scientific Data Hub**

European Commission

Overview About

username:  password:

Forgot your password?

### Register

Please fill this form to start the registration procedure then you will receive a mail with a link to validate your mail address. Finally an administrator will be able to let you access to the Sentinel Data Hub.

Please note that username and e-mail address should be provided in lower case only.

Username	<input type="text"/>	Confirm it	<input type="text"/>
Password	<input type="text"/>	Confirm it	<input type="text"/>
E-mail	<input type="text"/>	Confirm it	<input type="text"/>
Firstname	<input type="text"/>	Lastname	<input type="text"/>
Domain	<input type="text" value="Atmosphere"/>		
Usage	<input type="text" value="Research"/>		
Country	<input type="text"/>		

By registering in this website you are deemed to have accepted the [T&C for Sentinel data use](#).

2) fill this form to start registration procedure (username and e-mail address should be provided in lower case only ) then you will receive a mail with a link to validate your mail address. Finally an administrator will be able to let you access to the Sentinel Data Hub.

Please note that by registering in this website you are deemed to have accepted the T&C for Sentinel data use.

European Space Agency

# Sentinel Data Hub (3/4)




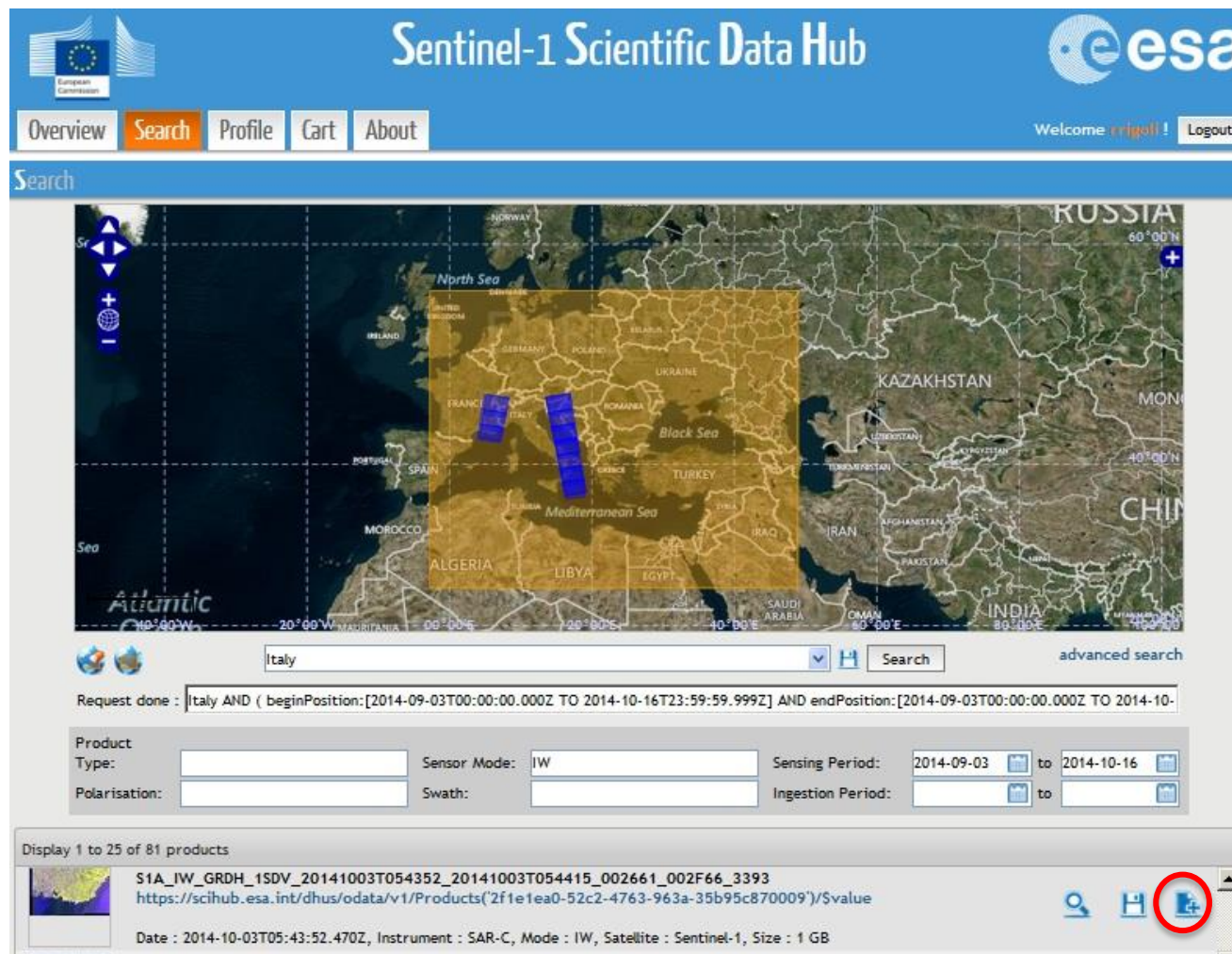
Once completed registration you can log in , click on **Search** and start use Sentinel hub interface to search and download sentinels data .

Search criteria available:

- Draw region of interest
- Full text search
- Advanced search (prod, type, acqu, dates..)

Select product of you interest and move it in the 'Cart' by clicking The **circled red** icon

 Online inspection of the searched products by browsing and pre-viewing the product metadata and measurements without downloading it. A preview panel displays information on the product contents and structure.



The screenshot displays the Sentinel-1 Scientific Data Hub interface. At the top, there is a navigation bar with the ESA logo and the text 'Sentinel-1 Scientific Data Hub'. Below this, there are tabs for 'Overview', 'Search', 'Profile', 'Cart', and 'About'. The 'Search' tab is active. The main area shows a map of Europe and the Mediterranean region with a yellow search area. Below the map, there are search filters and a list of products. The 'Search' button is highlighted in orange. The 'Cart' button is also visible. The 'Search' button is circled in red.

Search criteria available:

- Draw region of interest
- Full text search
- Advanced search (prod, type, acqu, dates..)

Select product of you interest and move it in the 'Cart' by clicking The **circled red** icon

Online inspection of the searched products by browsing and pre-viewing the product metadata and measurements without downloading it. A preview panel displays information on the product contents and structure.

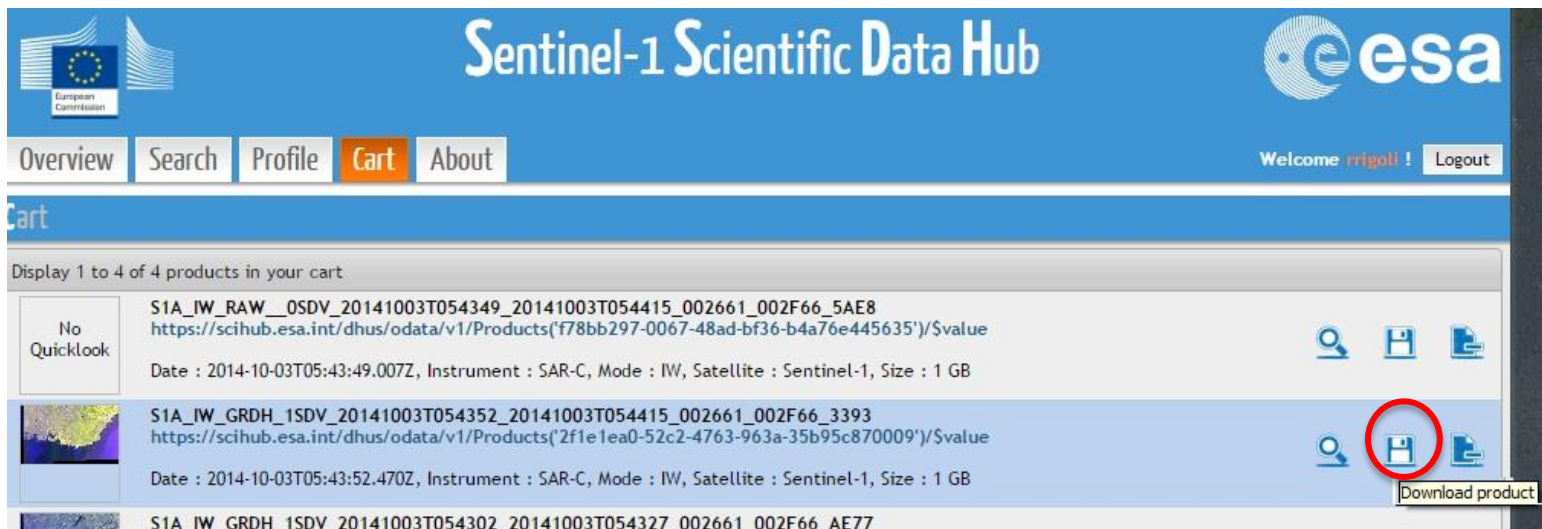


# Sentinel Data Hub (4/4)



Once moved the product(s) of your interest, click on **Cart** to start product download.

Select product of you interest and start download by clicking the **circled red icon**



Sentinel-1 products are provided for download via HTTP in the .ZIP archive file format. Compression is not applied. Click and download, shopping cart, batch download. A maximum of 2 concurrent downloads per user is allowed in order to ensure a download capacity for all users.

Next features:

*Batch scripting*

*Email notification (on user defined search criteria)*



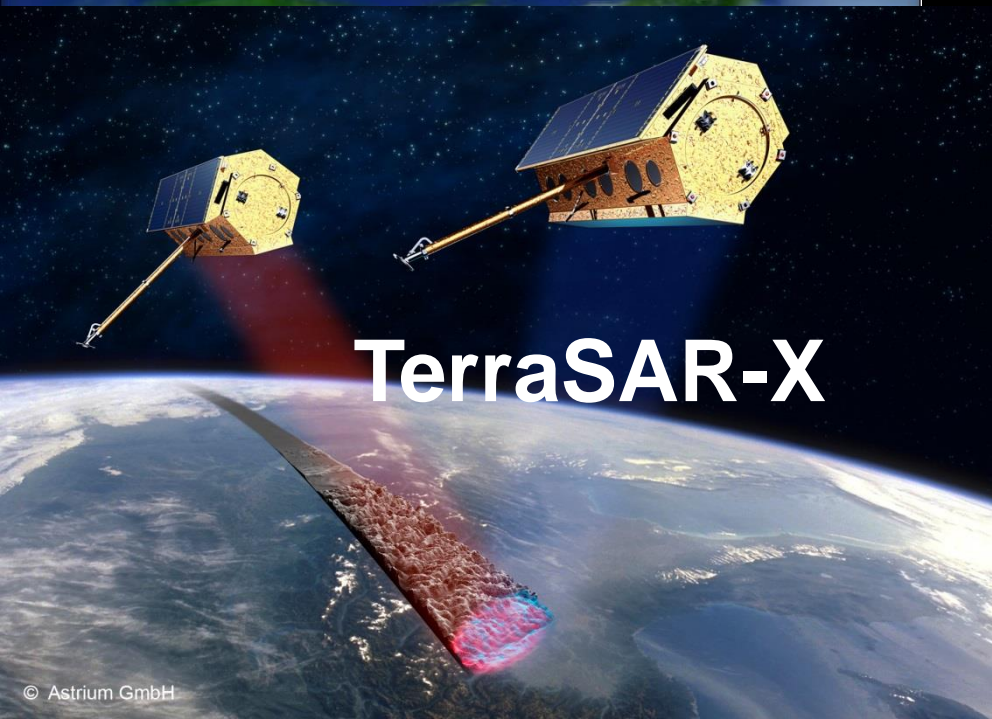
The European Space Agency (ESA) provides users with access to a number of non-ESA EO missions – so called **Third Party Missions (TPM)**.

ESA's TPM scheme has operated for more than 30 years and currently includes over 40 instruments on **more than 35 missions**.

TPM scheme is freely open to **the worldwide community** for the purpose **of research and applications development**

*Data policy depends on **data owner policy***

# TPM SAR highlights



## **Free and open dataset**

 Fast Registration (FR) is submitted online and immediate access is provided

## **Restricted dataset**

 Full Proposal (FP) is submitted online. Following peer review & proposal acceptance, a quota of products is allocated to the project

## **Occasionally**

 ESA issues an Announcement of Opportunity (AO) for either specific new missions, acquisition campaigns or research topics. Acceptance follows evaluation and feasibility

***Thank you  
for your attention***