

(A)SAR On-The-Fly

Data Dissemination and Processing Service

User Manual.

ASAR-OTF-UM, version 1.4, 19/05/2017

Introduction

A new (A)SAR data On-the-fly (OTF) data processing and dissemination service has been released by ESA. The service allows end-users to gain direct access to ESA's complete high-resolution (A)SAR archive from ERS-1, ERS-2 and ENVISAT, without the need to interface to the ESA Order Desk.

The service provides (A)SAR L1 high-resolution data as standard scenes in Envisat format, which are processed from L0 on user request by the system. Users can register themselves and immediately download L1 (A)SAR data products.

The service is available via the EOLI data ordering client, available online at <https://earth.esa.int/web/guest/eoli>.

Data Available

The service provides the following L1 products:

- ERS-1 SAR Image mode: SAR_IMS_1P, SAR_IMP_1P
- ERS-2 SAR Image mode: SAR_IMS_1P, SAR_IMP_1P
- ENVISAT ASAR Image Mode: ASA_IMS_1P, ASA_IMP_1P
- ENVISAT Alternating Polarization Mode: ASA_APS_1P, ASA_APP_1P
- ENVISAT Wide Swath Mode: ASA_WSS_1P

L1 products are provided as fixed standard scenes. An overlap between scenes has been added to mitigate the case of a feature being split between two scenes.

A higher daily quota for L1 data products download can be requested by completing a data service request justifying and describing the additional data needs.

Although nominally only L1 products are made available, limited amounts of L0 data can also be downloaded by users through the service, in exceptional cases. Access to Level 0 data requires the user to complete a data service request and the Agency's approval. L0 products are provided only as complete striplines.

Registering for the Service

Users can self-register to access (A)SAR Level 1 products via the following links:

- Envisat ASAR Level 1: https://earth.esa.int/FastRegistration/L1_STND_A_SAR_OTF-A
- ERS SAR Level 1: https://earth.esa.int/FastRegistration/L1_STND_SAR_OTF-A

To register to access data:

1. Click "Login My Earthnet" at the top of the page to log in with your SSO ID. If you do not have one, click "Register".
2. In case of first time registration complete or check the basic data on the first page and click "Save".
3. Under "Terms and Conditions acceptance", click the checkbox to confirm you accept the ESA T&Cs and press "Save".
The checkbox to sign the T&Cs will only appear upon first time registration for access to any ESA "open & free" dataset available via fast registration.
4. When all the above points have been performed, you will receive an email notification containing details of your product request including relevant access information. You will also find the access details under the "My Online Data" section on "My Earthnet".

If you wish to apply for a higher quota, or to request access to L0 data, complete a data service request at:

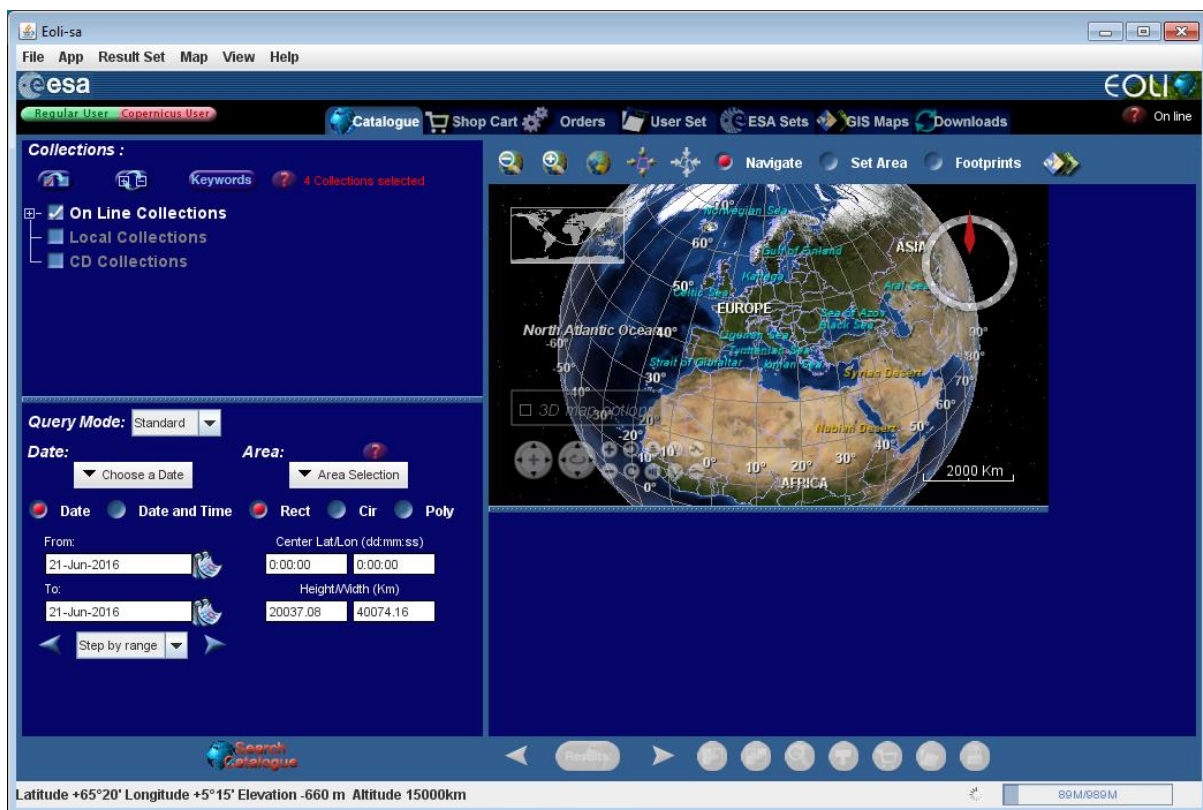
<https://earth.esa.int/web/guest/pi-community/apply-for-data/service-request>

This will then be sent to ESA for approval, and you will be notified by the EOPI team.

Downloading products via EOLI-SA

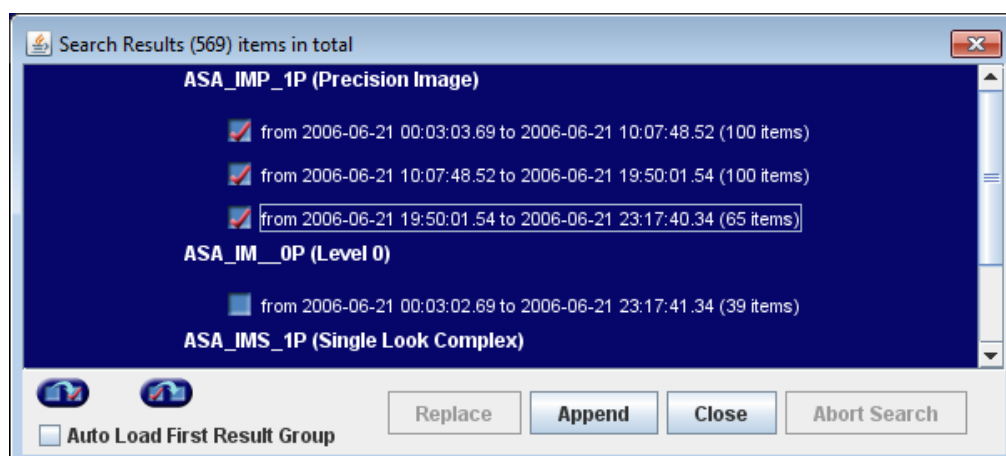
The easiest way to find and download available products is via ESA's EOLI-SA browser. This can be downloaded at:

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




To download (A)SAR data using EOLI:

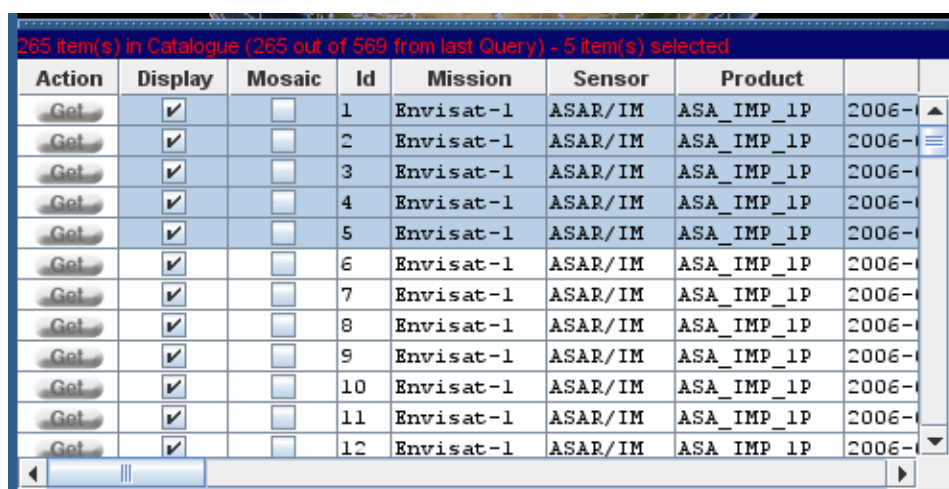
1. Under “Collections”, select the product(s) required.
 - Only the products listed on page 1 can be downloaded directly. To order other products, consult the EOLI-SA user manual available at the link above.
2. Select a date range using the input fields on the bottom left
3. Select an area by either entering data into the appropriate fields on the bottom left, or by selecting “Set Area” above the main map then using the mouse to select an area.
4. Press “Search Catalogue”
5. In the results popup (see image), choose the required results and click “Append”.



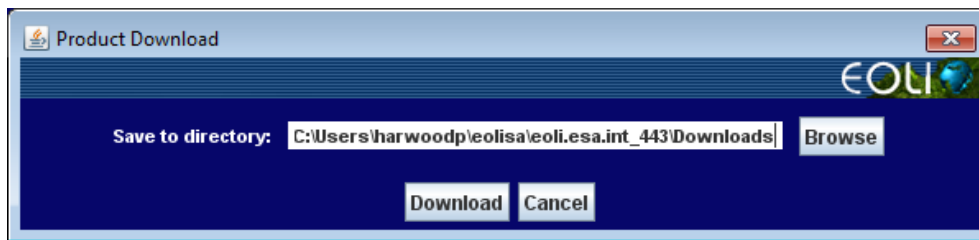
6. EOLI will now show a list of appended results, with footprints shown on the map and a set of preview down the right.



7. Select the product(s) required, then press the “Get” button in the action column.
 - If multiple products are selected, pressing “Get” will request the download of all selected products.
 - You can select all products using the “” button below the list.




8. Enter the location where products are to be downloaded to, and press “Download”.

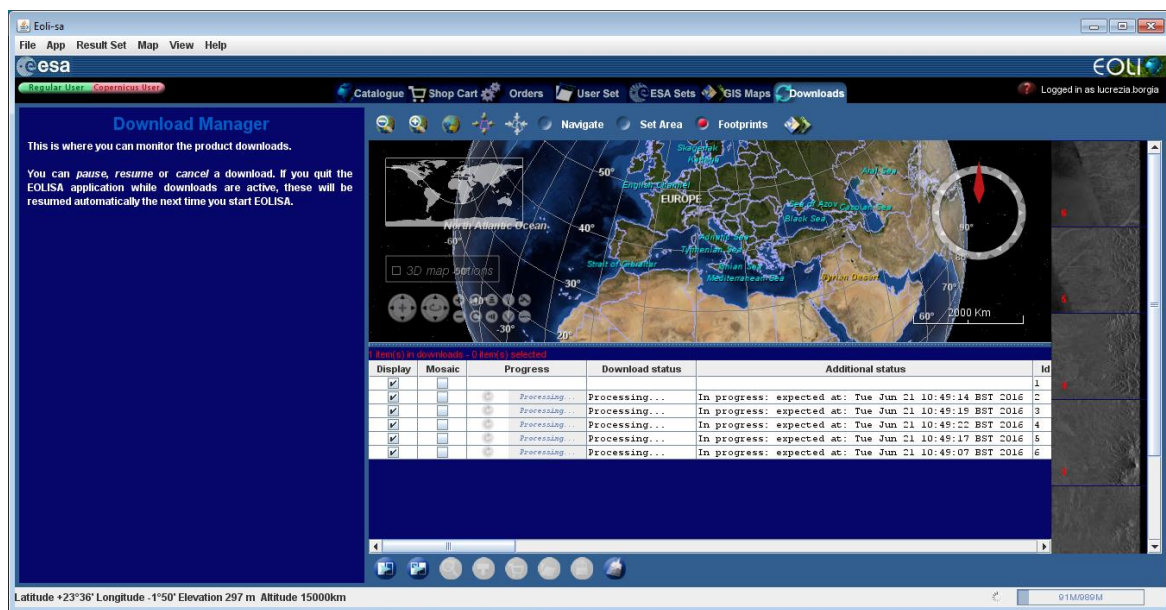


9. Enter your SSO ID and password in the popup and press login.



10. To monitor the progress of your requests, go to the “Downloads” tab. This shows the status of outstanding requests. Possible status options are:

- **Processing:** The request is being processed, and an estimated time to completion is shown.
- **Downloading:** the request has completed and is downloading. A percentage download is shown.
- **Completed:** The request has completed and has been downloaded.
- **Stopped:** The request has been paused. Press the refresh button  to resume.
- **Error:** There is a problem with your request. See page 9 for possible error messages.



1 item(s) in downloads - 0 item(s) selected

Display	Mosaic	Progress	Download status	Additional status	Id
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Processing...	In progress: expected at: Tue Jun 21 10:49:14 BST 2016	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Processing...	In progress: expected at: Tue Jun 21 10:49:19 BST 2016	2
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Processing...	In progress: expected at: Tue Jun 21 10:49:22 BST 2016	3
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Processing...	In progress: expected at: Tue Jun 21 10:49:17 BST 2016	4
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Processing...	In progress: expected at: Tue Jun 21 10:49:07 BST 2016	5
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Processing...	In progress: expected at: Tue Jun 21 10:49:07 BST 2016	6


1 item(s) in downloads - 0 item(s) selected

Display	Mosaic	Progress	Download status	Additional status	Id
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Processing...	In progress: expected at: Tue Jun 21 10:56:22 BST 2016	1
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Downloading ...		2
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Downloading ...		3
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Downloading ...		4
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Downloading ...		5
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Downloading ...		6


1 item(s) in downloads - 0 item(s) selected


Display	Mosaic	Progress	Download status	Additional status	Id
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Completed		1
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Completed		2
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Downloading ...		3
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Downloading ...		4
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Downloading ...		5
<input checked="" type="checkbox"/>	<input type="checkbox"/>		Completed		6

11. You can pause, resume or cancel a download. If you quit EOLI when products are downloading, they will resume automatically next time EOLI starts.

12. Once all downloads have completed, you can clear the list on the downloads tab by pressing the brush symbol () below the list.

EOLI permits other operations as well. For full details see the EOLI user manual. Two useful operations are:

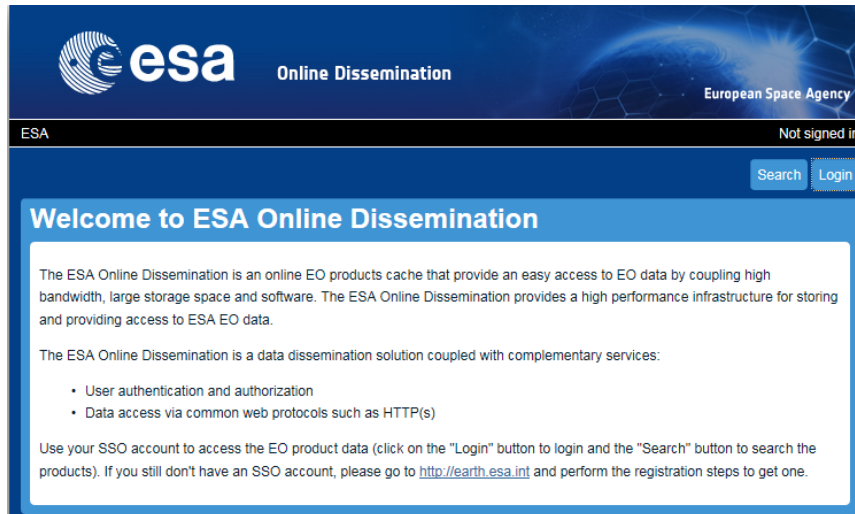
 : Save a product list to a private user set. This allows you to save the list for later use.

 : Export a product list as a CSV file. This allows you to send the list to other people.

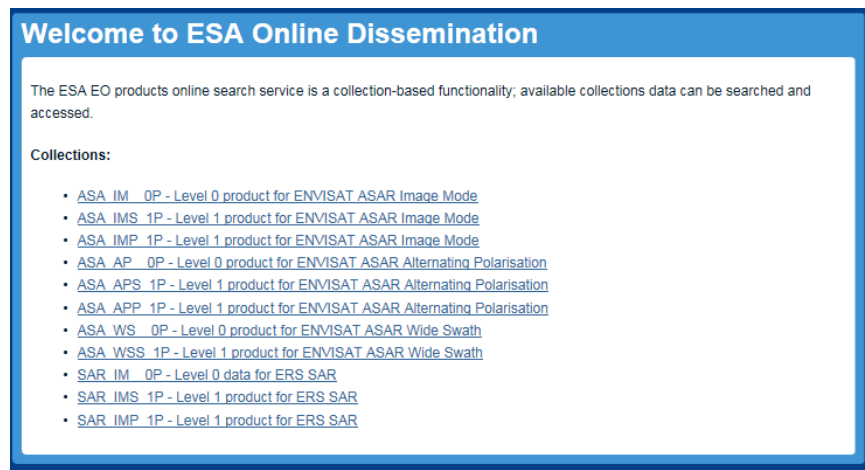
Downloading products directly from the web

There is an alternative way to access (A)SAR data through the OADS, though this is not as user friendly as EOLI and is recommended for advanced users only.

1. Go to <https://esar-ds.eo.esa.int/oads/access>.



2. Press the “login” button on the top-right and log in using your SSO ID to view collections.



3. Click on a collection then select “Search in collection by treeview”. Select sequentially the appropriate:
 - a. Mission phase
 - b. Year
 - c. Relative orbit
 - d. Frame

If you know all or part of the product name you can also “search by filename” from a given collection.

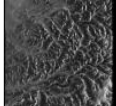
4. You will now see the product page. To download, select “Product”.

ESA Online Dissemination

Collection	ASA_IMS_1P - Level 1 product for ENVISAT ASAR Image Mode
Phase	2
Year	2005
Relative Orbit	8
Frame	2349

Available products (1)

ASA_IMS_1PNEA20050118_101630_000000152034_00008_15092_0000.N1




[Browse](#) [Product](#)

Orbit: 15092

Start: 2005-01-18T10:16:30.832Z

Stop: 2005-01-18T10:16:45.921Z

5. If accepted, you will be given a message “Retry after [time] (local time)”. If not, you will be given one of the error messages listed on page 9.



Online Dissemination

European Space Agency

ESA

Product download response

Response code	ACCEPTED
Response message	
Retry after	11:23:00 (local time)

[Back](#) [Reload](#)

6. Wait until your computer shows this local time, then press “reload”. The product will now start to download. (Depending on your browser settings, you may be prompted for a download location.)

Daily product quotas

Anyone may self-register to download (A)SAR data using the procedure described on page 2.

Standard users are entitled to receive a pre-defined number of products per collection per day. Once this daily quota is exhausted, please try again the next day.

Users who have a project proposal or a data service request accepted by ESA are assigned as **advanced users**. Such users are guaranteed a specified number of L1 products per collection per day, known as the quality of service (QoS). However once they have exceeded their QoS they may continue to submit requests. The system will accept the requests if the system load is currently low (i.e. if no other users have outstanding requests) and will reject them if the system load is high (i.e. if other users, who have not exceeded their QoS, have pending requests). The aim is to allow users to download as much data as they need, as long as this does not interfere with other users.

Some users can be assigned as **advanced+ users**: this is the same as advanced users, but with additional access to L0 data. L0 access will only be granted in special cases. L0 data are provided only as complete striplines, and are subject to the same QoS restrictions as L1 but with an additional restriction of 100 products per collection per year.

The values of the quotas for the different categories are summarised in the table below. All values apply per collection, i.e. separately to ASAR IM, AP and WS and to SAR IM. Daily quotas refer to the period from 00:00 to 23:59 CET, while “year” refers to a calendar year.


User Category	L1 product quota	L0 product quota
Standard	5 scenes / day	No access
Advanced	30(*) scenes / day	No access
Advanced+	30(*) scenes / day	30(*) striplines / day 100 striplines / year

(*) a higher value may be possible subject to overall system use.

Possible errors

You have already downloaded your granted number of products for today.

You have reached your daily limit (see page 9). If you are a standard (self-registered) user, you will need to wait until the next day, while if you have “advanced” status you will be able to retry later in the same day, once the load on the system is lower.

To resubmit orders from EOLI, restart EOLI, then previously submitted requests will appear in the downloads tab marked “stopped”. Press the refresh button  to resume

To resubmit orders from the web interface, simply refresh the page.

The system is currently serving the granted requests of other users, and has reached the total number of parallel downloads.

The number of concurrent users has exceeded the capacity of the system to download products. Try resubmitting your request again later.

Product unavailable

The system has not been able to produce the requested product due to an unexpected error, e.g. a missing AUX file. If you still require this product, please contact EOHelp directly.

Resource couldn't be accessed,

Internal server error

Java exception

Operation timed out

These error messages usually mean a temporary connection error or system outage. Try resubmitting the request again after a few minutes. If it still doesn't work, contact EOHelp.

Forbidden: Please sign the terms and conditions

You are not authorised to access these data products. Please apply for them as described on page 2.

Quality Control

Detailed product quality information for ERS-1/2 SAR data is given online at:

<https://earth.esa.int/web/sppa/mission-performance/esa-missions/ers-2/sar/quality-control-reports/product-anomalies>

Detailed product quality information for Envisat ASAR is given online at:

<https://earth.esa.int/web/sppa/mission-performance/esa-missions/envisat/asar/quality-control-reports/products-anomalies>

In particular, users should be aware that ERS-2 data from January 2001 onwards should be used with caution as they were acquired under degraded attitude conditions.

Further Assistance

For assistance, please contact ESA's earth observation helpdesk, EOHelp, at:

eohelp@esa.int

A list of current known issues will be maintained at:

<https://earth.esa.int/web/guest/data-access/how-to-access-eo-data/asar-on-the-fly-faq>