esa

ACCESS TO
ENVISAT DATA

European Space Agency
Agence spatiale européenne

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1. INTRODUCTION

In March 2002, the European Space Agency launched Envisat, an advanced polar-orbiting Earth observation satellite which provides measurements of the atmosphere, ocean, land, and ice. Since then, ESA distributes data that support earth science research and allow monitoring of the evolution of environmental and climatic changes, facilitating the development of operational and commercial applications.

The scope of this document is to focus on the data dissemination methods and the different means offered to Users to access the Envisat data.

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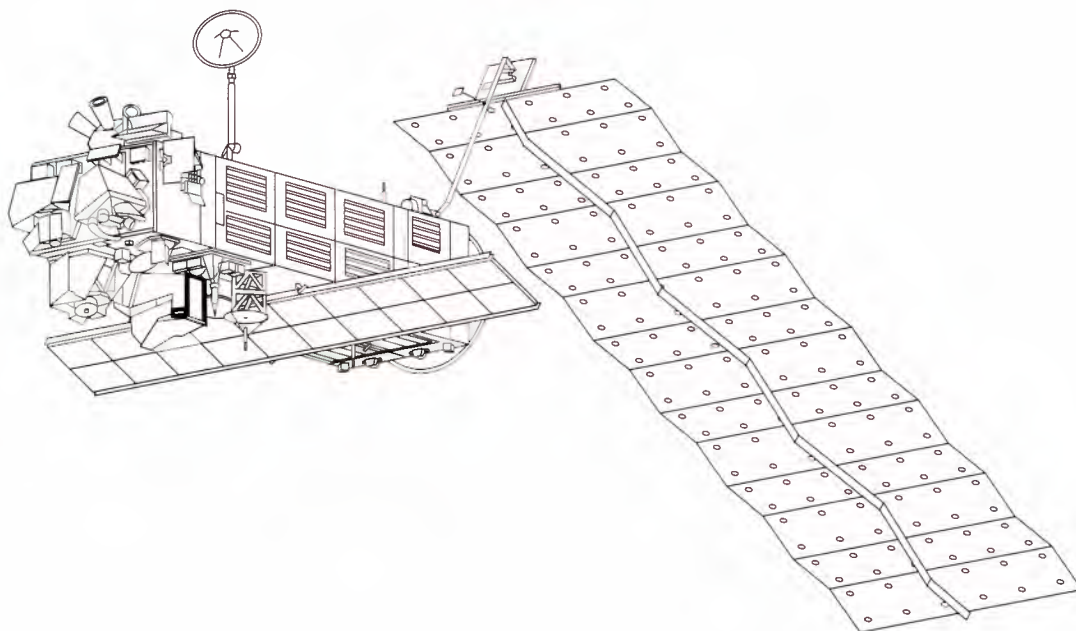
2. ABBREVIATIONS

AO	Announcement of Opportunity
BRM	Background Regional Mission
DDS	Data Dissemination System
DE	Distributing Entity
EO	Earth Observation
EOPI	Earth Observation Principal Investigator
ESA	European Space Agency
EWFS	Envisat Web File Server
FR	Full Resolution
FTP	File Transfer Protocol
HR	High Rate
LR	Low Rate
MERCI	MERIS Catalogue and Inventory
MR	Medium Resolution
NRT	Near Real Time
PAC	Processing and Archiving Center
PI	Principal Investigator
RA	Rolling Archive
RR	Reduced Resolution
SSR	Solid State Recorder

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HOW TO APPLY FOR ENVISAT DATA

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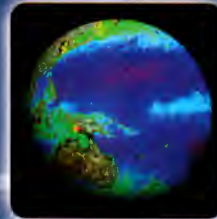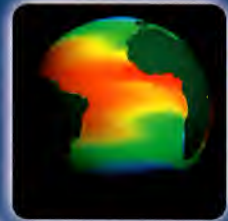
3. HOW TO APPLY FOR ENVISAT DATA

3.1 ESA EO DATA POLICY

The ESA Earth Observation data policy was defined by the ESA Member States with the objective to maximize the beneficial use of Envisat data and to stimulate a balanced development of science, public utility and commercial applications, consistent with the mission objectives.

The conditions attached to the distribution of Envisat data shall depend on the use of the data.

The following two categories of use are defined:

- Category 1 use: Research and applications development use of data in support of the mission objectives, including research on long term issues of Earth System science, research and development in preparation for future operational use and ESA internal use. Data for Category 1 use are directly provided by ESA.
- Category 2 use: All other uses, which do not fall into Category 1, including operational and commercial use. Only ASAR data are considered within Category 2 use. Data for Category 2 use are provided by Distributing Entities appointed by ESA.

The complete text of the Data Policy can be found on the ESA Earth Observation Principal Investigator (EOPI) web site http://eopi.esa.int.

3.2 HOW TO APPLY FOR CATEGORY 1 USE

Application for Category 1 use data access can be submitted to ESA at any time, using the web interface available within the EOPI web site http://eopi.esa.int.

3.2.1 APPLICATION

For data *systematically* acquired, generated and disseminated on-line (e.g. MERIS Reduced Resolution data), a simplified category-1 request (Fast registration) can be submitted. Acceptance notification is immediate.

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The list of products that fall under this category is available on the EOPI web site.

Fig. 1 - EOPI Web Portal

- When the requested data are subject to specific acquisition or dissemination constraints (e.g. ASAR HR and MERIS FR) a category-1 proposal shall be submitted. The proposal is submitted to a peer review process by the category-1 advisory group (and it takes approximately 8 weeks up to acceptance notification). Assuming a positive scientific review, the proposal is accepted once the feasibility, in terms of data and service provision, has also been confirmed. A quota of products is allocated to the project at that time, with a decision whether acquisition requests can be placed or if the quota is only for archived products.

In addition, ESA may release announcements of opportunity (AOs) to stimulate research on particular topics and exploiting specific datasets. Objectives, conditions and timeframes for such AOs are specified in the documentation associated to the opportunity and available on the EOPI Web site. Data are normally provided in those cases free of charge.

For information on the currently opened AOs, see the EOPI Web site.

3.2.2 TERMS AND CONDITIONS

Once the Project is approved, the Principal Investigator shall sign the Terms and Conditions for the utilization of Category 1 use data, where he commits to use the data provided only for the purpose defined in the accepted project, widely publish his results always referring to "data provided by the European Space Agency" and provide regular progress reports to ESA.

The complete text is available on the EOPI web site.

The signed document, together with the list of agreed Co-PIs, shall be sent to the Earth Observation Help and Order Desk (eohelp@eo.esa.int) that will then provide ordering instructions or information on how to access the on-line data.

Note

In the Category-1 Fast registration process instead, the document is signed during project submission.

3.2.3 PROJECT UPDATE

Whenever the existing PI has a need for an additional quota, different product types or a different dissemination method (NRT, Rolling Archive, etc), he shall present the justification for the new needs in a progress report. The request will be analysed by the Mission Manager and the Users Services.

3.2.4 PRICE LIST

The data are provided free of charge (in the specific case of an Announcement of Opportunity or if available systematically on-line) or at reproduction cost, within the quota defined at project acceptance, see "Envisat product prices for Category 1 use" on the EOPI web site. The invoicing is performed once a year by the Earth Observation Help and Order Desk.

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3.3 HOW TO APPLY FOR CATEGORY 2 USE

There are two Distributing Entities, selected by ESA, that ensure access to Envisat data for Category 2 use (ASAR HR only).

In order to obtain Envisat ASAR HR data for commercial or operational application, please contact:

- **EMMA** - represented by Eurimage

  Customer Services

  tel.: +39 06 406 94 222

  fax: +39 06 406 94 232

  e-mail: info@eurimage.com

  www.eurimage.com

or

- **SARCOM** - represented by Spot Image

  Sales department

  tel.: +33.562.194040

  fax: +33.562.194011

  e-mail: sales@spotimage.fr or ers.envisat@spotimage.fr

  www.spotimage.com

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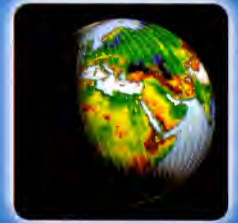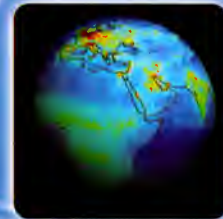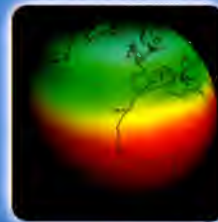
4. OVERVIEW ON ENVISAT PRODUCTS AND SERVICES

4.1 INSTRUMENTS AND PRODUCTS

General information about the Envisat mission, its space and ground segments can be found within the Envisat web page at http://envisat.esa.int/.

4.1.1 ASAR

The Advanced Synthetic Aperture Radar (ASAR) operating at C-band ensures continuity with the ERS-1/2 SAR instrument. It features enhanced capability in terms of coverage, range of incidence angles, polarisation, and modes of operation.

Detailed information about the ASAR instrument operation modes and the corresponding ASAR products can be found within the ASAR Product Handbook at:

http://envisat.esa.int/dataproducts/asar/CNTR.htm

whereas instrument status and performance are reported under:

http://earth.esa.int/pcs/envisat/asar/public_reports/

4.1.2 MERIS

The MEdium Resolution Image Spectrometer (MERIS) measures the solar radiation reflected by the Earth and clouds, at a ground spatial resolution of 1200 m (Reduced Resolution) and 300 m (Full Resolution), in 15 spectral bands in the visible and near infrared.

Detailed information about the MERIS instrument operation modes and the corresponding MERIS products can be found within the MERIS Product Handbook at:

http://envisat.esa.int/dataproducts/meris/CNTR.htm

whereas instrument status and performance are reported under:

http://earth.esa.int/pcs/envisat/meris/reports/cyclic/

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4.1.3 AATSR

The Advanced Along Track Scanning Radiometer (AATSR) ensures continuity of the ATSR-1 and ATSR-2 datasets of precise Sea Surface Temperature (SST), thereby ensuring the production of a unique 10 year near-continuous dataset at the levels of accuracy required (0.3 K or better) for climate research. Detailed information about the AATSR instrument operation modes and the corresponding AATSR products can be found within the AATSR Product Handbook at:

http://envisat.esa.int/dataproducts/aatsr/CNTR.htm

whereas instrument status and performance are reported under:

http://earth.esa.int/pcs/envisat/aatsr/reports/cyclic/

4.1.4 RA-2 AND MWR

The Envisat Radar Altimeter (RA-2) is the continuity of the ERS-1 and ERS-2 Radar Altimeters, providing improved measurement performance and new capabilities.

Operating over oceans, its measurements are used to determine the ocean topography, thus supporting the research of ocean circulation, bathymetry and marine geoid characteristics and the wind speed and significant wave height at sea, thus supporting weather and sea state forecasting. Furthermore, the RA-2 is able to map and monitor sea ice, polar ice sheets and most land surfaces.

The Radar Altimeter signal is corrected using the measurement of the integrated atmospheric water vapour column and cloud liquid water content from the Microwave Radiometer (MWR). In addition, MWR measurement data are useful for the determination of surface emissivity and soil moisture over land, for surface energy budget investigations to support atmospheric studies and for ice characterization.

Detailed information about the RA-2 and MWR instruments operation modes and the corresponding products can be found within the RA-2-MWR Product Handbook at:

http://envisat.esa.int/handbooks/ra2-mwr/

whereas instruments status and performance are reported under:

http://earth.esa.int/pcs/envisat/ra2/reports/pcs_cyclic/

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and:

http://earth.esa.int/pcs/envisat/mwr/reports/.

4.1.5 DORIS

The Doppler Orbitography and Radiopositioning Integrated by Satellite (DORIS) is a tracking system providing range-rate measurements of signals from a dense network of ground-based beacons. These data are precision processed on ground providing the satellite orbit with an accuracy of the order of centimetres. They are also processed on board to provide real time satellite positions with an accuracy of some tens of centimeters.

In addition to enabling orbit determination, data are provided to:

- help in the understanding of the dynamics of the solid Earth;
- monitor glaciers, landslides and volcanoes;
- improve the modeling of the Earth gravity field and of the ionosphere.

Detailed information about the DORIS instrument can be found at:

http://envisat.esa.int/object/index.cfm?fobjectid=1668

4.1.6 SCIAMACHY

The SCanning Imaging Absorption SpectroMeter for Atmospheric CHartographY (SCIAMACHY) primary mission objective is to perform global measurements of trace gases in the troposphere and in the stratosphere.

The list of SCIAMACHY products can be found within the Product Handbook at:

http://envisat.esa.int/instruments/sciamachy/data-app/dataprod.html

whereas instruments status and performance are reported under:

http://earth.esa.int/pcs/envisat/sciamachy/reports/

4.1.7 MIPAS

The Michelson Interferometer for Passive Atmospheric Sounding (MIPAS) is used for the measurement of high-resolution gaseous emission spectra at the Earth's limb. It operates in the near to mid infrared where

many of the atmospheric trace-gases, playing a major role in atmospheric chemistry, have important emission features.

The list of MIPAS products can be found within the Product Handbook at:

http://envisat.esa.int/instruments/mipas/data-app/dataprod.html

whereas the instruments status and performance are reported under:

http://earth.esa.int/pcs/envisat/mipas/reports/

4.1.8 GOMOS

The primary measurement objective of the Global Ozone Measurement (GOMOS) is the measurement of the total column amounts and profiles of ozone and of other gases involved in the ozone photo chemistry.

The list of GOMOS products can be found within the Product Handbook at:

http://envisat.esa.int/instruments/gomos/data-app/dataprod.html

whereas instruments status and performance are reported under:

http://earth.esa.int/pcs/envisat/gomos/reports/

4.2 SERVICES DESCRIPTION

This chapter briefly describes the data acquisition and processing chain, from instrument planning to data delivery to the user.

4.2.1 MISSION PLANNING

The Envisat mission planning is performed at ESRIN based on the user requests and a set of predefined rules aiming at using the satellite and its payload at its best, ensuring data availability to the majority of the user community and resolving conflicts.

4.2.1.1 Fixed planning and "user on-demand" planning

The following Envisat instruments are operated according to a predefined and systematic planning:

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- AATSR, RA-2/MWR, SCIAMACHY, MIPAS and GOMOS, always in measurement mode;
- MERIS Reduced Resolution, operated systematically over descending passes;
- ASAR LR: ASAR Global Monitoring Mode over land and polar areas, ASAR Wave Mode over oceans, when not operated in High Rate Mode, that is when no user request has been received and no Background Regional Mission (BRM) is implemented.

On the other hand, MERIS Full Resolution and ASAR High Rate modes (Image Mode, Alternating Polarisation Mode, Wide Swath Mode) are operated according to the user demand. In case of no user demand for a particular time slot, the instrument is operated according to a predefined Background Regional Mission (BRM) planning.

Important note: *The ASAR instrument has 5 modes of operations: Image Mode (IM), Alternating Polarisation Mode (AP), Wide Swath Mode (WS), Global Monitoring Mode (GMM) and Wave Mode (WV). All these modes are mutually exclusive at a single time, the ASAR instrument can be operated only with a single mode and sub-mode (i.e. unique imaging swath and polarization in the case of IM and AP). Specific rules, detailed below, shall be applied whenever planning conflicts exist between ASAR User requests.*

4.2.1.2 Background Regional Mission (BRM)

The BRM is the default planning implemented when no specific user request has been received. The aim is to systematically cover some areas in the operations mode most requested by the user community and to fully exploit the resources of the satellite.

For example:

- MERIS FR over land and coast;
- ASAR WS coverage of sea ice.

More information on the BRM is available at:

http://earth.esa.int/object/index.cfm?fobjectid=4045
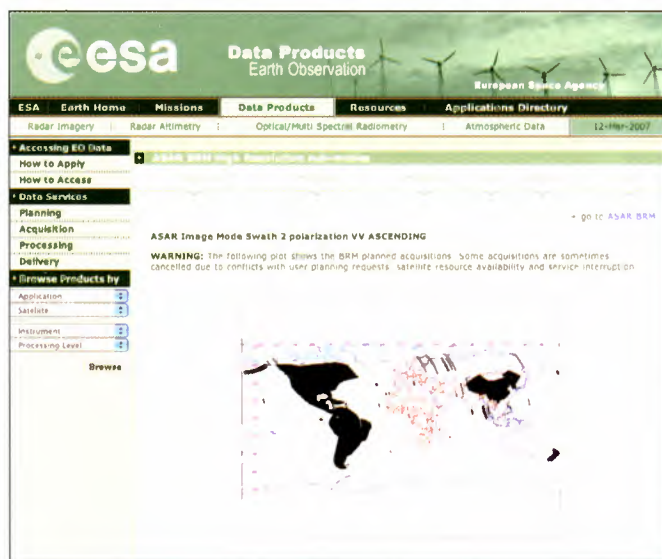
Fig. 2 - BRM Information

4.2.1.3 "Red Zones"

A red zone is an area over which programming requests by users are restricted due to a specific and permanent acquisition scenario in place. There are currently two of these areas:

■ **First zone: North Sea + the Netherlands + Belgium + North-West Germany**

Due to the high number of users over the area and in order to reduce the number of potential conflicts to be handled, the following planning rules are applied, only over descending passes:

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- over Land : ASAR Image Mode beam 2 with VV polarization

- over Sea: Wide Swath Mode with VV polarization
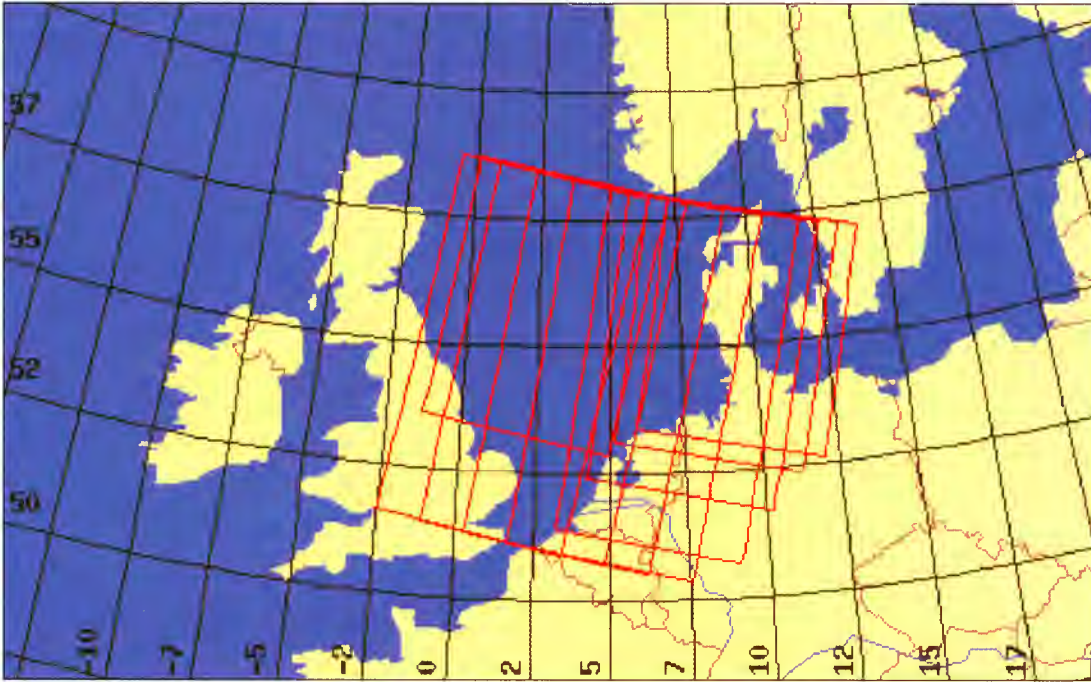
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The following table lists the affected tracks.

NORTH SEA RED ZONE (ONLY DESCENDING PASSES)

Track	Mode	Polarisation	Start time	Stop time
22	WS	V/V	9:46:15	9:47:37
65	WS	V/V	9:51:57	9:53:51
108	WS	V/V	9:57:39	9:59:41
151	WS	V/V	10:03:21	10:05:23
194	WS	V/V	10:09:03	10:11:05
237	WS	V/V	10:14:47	10:16:47
251	WS	V/V	9:43:24	9:44:40
294	WS	V/V	9:49:06	9:50:41
337	IS2	V/V	9:55:49	9:57:08
380	IS2	V/V	10:01:37	10:02:51
423	IS2	V/V	10:07:27	10:08:30
466	WS	V/V	10:12:02	10:13:11
466	IS2	V/V	10:13:36	10:14:14

Therefore, user requests for ASAR acquisitions are only accepted in the area *over ascending passes.*

■ Second zone: Italy

In the frame of a Business Development initiative from Eurimage, the Italian peninsula is systematically covered according to the following scheme: ERS-like mode (IM, IS2, VV) over descending passes during even numbered cycles and over ascending passes during odd numbered cycles.
The users have therefore access to programming requests over ascending or descending passes, depending on the cycle.

4.2.1.4 Priorities and conflicts handling

Up to 15 days before acquisition, Category-1 users are served on a first in, first served basis while

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Category-2 users have higher priority and can cancel a previously entered Category-1 request. Within 2 weeks from sensing, no Category-1 order is accepted and a Category-2 request can only be accepted if there is a free slot or if the Category-1 user is willing to give up the acquisition request. No request can be planned within 2.5 working days from sensing except in very specific emergency situations, to be approved by Management. A user request can be cancelled at any time by a calibration/validation activity request or by emergency requests.

4.2.1.5 Constraints

While performing the instruments planning, the Mission Planners have to cope with the following system constraints:

- The ASAR can be operated for a maximum of 30 minutes per orbit, including 10 minutes in eclipse, segmented in a maximum of 10 HR segments, each one having a minimum duration, depending on the instrument mode (40 to 50 seconds) and a maximum duration of 10 minutes;
- There is a transition time to be taken into account between ASAR operation modes;
- The 37 ASAR operating modes are mutually exclusive;
- Regarding the on-board Recorders:
  ASAR HR and MERIS FR data cannot be recorded simultaneously
  ASAR HR data cannot be downlinked in real time simultaneously with SSR dump of ASAR data
  There are two ESA acquisition stations, acquiring data recorded on-board in Kiruna and ESRIN.

4.2.2 DATA ACQUISITION

Envisat data can be acquired *worldwide* and downlinked to ESA acquisition stations. This worldwide capability is possible through the use of Artemis, the ESA Data Relay Satellite, and of the on-board recorders.

The main ESA acquisition stations are located at ESRIN (Italy), for data transmitted via Artemis, and at Kiruna (Sweden).

In addition, Regional Mission data (MERIS FR and ASAR HR modes) are acquired in Matera (Italy) and in several acquisition stations not operated by ESA.

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Acquisition constraint:

ASAR HR and MERIS FR data can only be acquired simultaneously within European stations masks and Artemis coverage.

4.2.3 DATA PROCESSING

Envisat data processing to Level 0, Level 1 and Level 2 is performed in different ways:

■ **Systematic and "user on-demand" processing at the acquisition stations**

Products are generated either systematically, following data acquisition, or only when there is a specific request from a user. The raw data originating from the following instruments are processed systematically:

- all Low Rate instruments;
- ASAR Global Monitoring and Wave modes;
- MERIS Reduced Resolution;
- ASAR HR (Medium Resolution products only);
- MERIS FR (over Europe and over the CCRS Canadian stations).

The ASAR HR High Resolution data and the remaining coverage of MERIS FR are instead only processed on request.

The table below lists the products falling into each category.

Product type	Processing type at acquisition station
ASAR HR Medium Resolution (APM, IMM, WSM)	
ASAR LR Level 1 and 2 (ASA_GM1_1P, ASA_WVS_1P, ASA_WVW_2P)	
MERIS FR over Europe Level 1 and 2 (MER_FRS_1P and MER_FRS_2P)	
MERIS FR acquired at Prince Albert and Gatineau stations Level 1 and 2 (MER_FRS_1P and MER_FRS_2P)	
AATSR Level 1 and 2 (ATS_TOA_1P, ATS_NR__2P, ATS_AR__2P, ATS_MET_2P)	Product usually available 3 hours after acquisition
MERIS RR Level 1 and 2 (MER_RR__1P, MER_RR__2P, MER_RRC_2P, MER_RRV_2P, MER_LRC_2P)	(within 24 hours for MERIS FR Level 2 over North America)
RA-2 Level 2 (RA2_FGD_2P, RA2_WWV_2P)	
SCIAMACHY Level 1 (SCI_NL__1P)	
GOMOS Level 1 and 2 (GOM_TRA__1P, GOM_NL_2P, GOM_RR_2P)	
MIPAS Level 1 (MIP_NL__1P)	
ASAR HR Level 0 and 1 (All but the Medium Resolution)	On-request off-line processing (i.e. on user demand)
MERIS FR Level 1 and 2 (MER_FR__1P, MER_FR__2P, MER_FRS_1P, MER_FRS_2P)	Note: NRT service is available for a limited number of products, following preliminary agreement with EOHelp (Order Desk)

■ Near Real Time (NRT) and off-line processing

Products are generated either in Near Real Time at the acquisition facilities (typically 3 hours from data acquisition for Low Rate data and one day for High Rate data) or off-line at the Processing and Archiving Centers (PACs) any time from a few hours following the acquisition. Off-line products have the same format and content of the NRT products, but benefit from a posteriori knowledge of calibration, auxiliary data and precise orbit. They are called consolidated products.

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The following table presents, for each category of products, the feasibility of NRT and off-line processing.

Products	NRT processing at Acquisition Facility	Off-line processing at PAC
ASAR Medium Resolution	ASA_IMM_1P ASA_WSM_1P ASA_APM_1P	ASA_IMM_1P ASA_WSM_1P ASA_APM_1P
Other ASAR HR	all other ASAR HR products (on request, within 24 hours, limited service)	all other ASAR HR products
ASAR LR	ASA_GM1_1P ASA_WVS_1P ASA_WVW_2P	ASA_WVI_1P
MERIS FR	MER_FR__1P (on request, within 24 hours, limited service) MER_FR__2P (on request, within 24 hours, limited service) MER_FRS_1P (European and North America coverages) MER_FRS_2P (European and North America coverages)	MER_FR__1P MER_FR__2P MER_FRS_1P MER_FRS_2P
MERIS RR	MER_RR__1P MER_RR__2P MER_RRC_2P MER_RRV_2P MER_LRC_2P	MER_RR__1P MER_RR__2P MER_RRC_2P MER_RRV_2P
AATSR	ATS_TOA_1P ATS_NR__2P ATS_AR__2P ATS_MET_2P	ATS_TOA_1P ATS_NR__2P ATS_AR__2P
RA-2	RA2_FGD_2P RA2_WWV_2P	RA2_IGD_2P RA2_GDR_2P RA2_MWS_2P
SCIAMACHY	SCI_NL__1P	SCI_NL__1P SCI_OL__2P
GOMOS	GOM_TRA_1P GOM_LIM_1P GOM_NL__2P GOM_RR__2P	GOM_TRA_1P GOM_LIM_1P GOM_NL__2P
MIPAS	MIP_NL__1P	MIP_NL__1P MIP_NL__2P

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■ Data reprocessing

Data reprocessing is a regular activity as a consequence of the improvement of the processing algorithms. It consists in gathering the full Level 0 consolidated dataset from one instrument and generating the Level 1 and Level 2 corresponding products. The following has been performed:

Instrument	Reprocessing
AATSR	Done in 2008
ASAR Wave	Done in 2006
MERIS RR	Third reprocessing planned for 2009
GOMOS	Third reprocessing planned for early 2009
MIPAS	First reprocessing performed in 2005; second reprocessing planned early 2009
SCIAMACHY	Second reprocessing performed in 2007-2008; Third reprocessing planned early 2009
RA2	Second reprocessing planned for 2008-2009

4.2.4 DATA DISSEMINATION

Envisat data products are delivered in different ways:

■ Delivery on media

CD-Rom and DVD-Rom are the traditional delivery methods used for orders of archived and future ASAR HR and MERIS FR large products and also for orders of archived RA-2 products. LTOs is used in very special cases when large volumes are involved.

■ Delivery via Internet

There are several interfaces for accessing the Envisat data available online:

- Rolling Archive(RA)
- Envisat Web File Server (EWFS)
- Stations FTP servers
- PACs FTP servers
- FTP pick-up at PACs and stations
- MERCI

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For these services, access should be specifically requested in any new Category-1 proposal or during Fast Registration process. For existing projects, access shall be requested to eohelp@eo.esa.int.

■ *Rolling Archive (RA)*

The Rolling Archive is a server available at the two main ESA acquisition stations of Kiruna (PDHS-K) and ESRIN (PDHS-E). It contains 9 (ESRIN) to 11 (Kiruna) directories of products generated systematically following the acquisition (nominally within 3 to 24 hours) and kept on-line for one to two weeks:
- ASAR systematic: ASAR IM, AP and WS Medium Resolution Level 1 products;
- ASAR GM systematic: ASAR GM mode Level 1 products;
- MERIS FRS systematic: MERIS FR full swath Level 1 and Level 2 products over Europe;
- MERIS FRS Level 1 and 2 products over North America;
- MERIS LR systematic: MERIS RR Level 1 and 2 products;
- AATSR systematic: AATSR Level 1 and 2 products;
- Browses: all browses.

The other 2 directories hold products generated on-request at the station and are used to satisfy requests for NRT delivery of HR data. Orders are in most of the cases for future acquisition and production when NRT access has been approved. However, this delivery method is now less frequent, in favor of the new FTP pick-up mechanism.

It can also be used to distribute recent data (acquired in the last month as the archive of Level 0 at the stations is limited in time), always in case of urgent delivery. The products involved are:
- ASAR HR on-request;
- MERIS FR on-request.

Matera is also hosting, on its Rolling Archive, its systematic production of ASAR HR Medium Resolution and MERIS FR products and the generated on-request ASAR HR and MERIS FR products.

The Rolling Archive server only allows the user to download files corresponding to one acquisition segment/orbit (in the form of zip compressed files). The product of interest can be identified by its filename (with start time or orbit number).

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■ *Envisat Web File Server (EWFS)*

When the user has a specific area of interest, the Agency advises the use of the EWFS instead of the Rolling Archive to access the same product archives of Kiruna, ESRIN and Matera, from one single http address at ESRIN (but the stations of Kiruna and Matera also have their local address, in case of problem).

In contrast to the full orbits provided on the Rolling Archive, the EWFS allows users to download a product covering only a selected geographical region. Via the EWFS user interface, it is possible to select an area of interest on a map and the list of products available at the ESA stations will be displayed beneath.
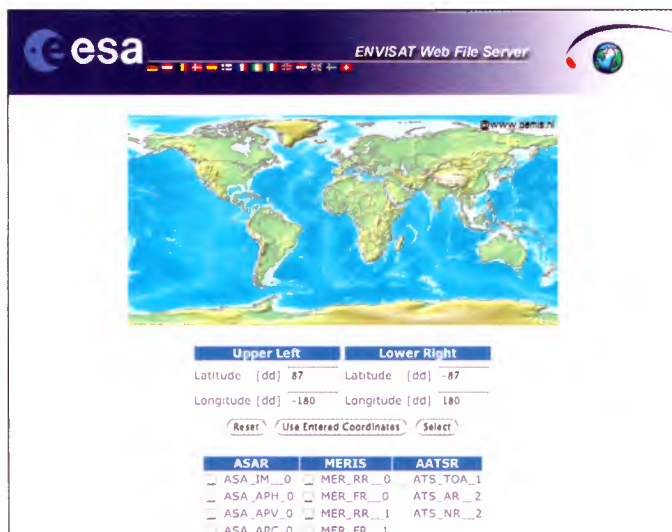

Fig. 3 - Envisat Web file Server

■ *Stations FTP servers*

The Kiruna and ESRIN FTP servers host 7 days of near-real-time systematic data production, mainly meteo products and level 2 products. The products are available right after production, nominally within 3 hours from sensing. It is of interest for operational atmospheric and climate modeling applications.

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■ *PACs FTP server*

The FTP servers from the French Processing and Archiving Centre (F-PAC) and the German Processing and Archiving Centre (D-PAC) host most of the off-line systematic production of the centers. These are mainly consolidated products, and they are available from 1 to 6 weeks after the acquisition date, with longer retention time (from 2 months to the entire mission lifetime, see next section for details).

■ *FTP pick-up at PACs and stations*

The service is now available to any user as a specific order option in EOLI-SA. In this case, the data are generated as soon as possible by the center receiving the order and once the product is available, the user receives an E-mail (sender is eohelp@eo.esa.int) notifying the data availability and its location (server address, username and password). The user has then 7 to 10 days to pick up the product.

■ *MERCI*

MERCI is a web based application that gives access to the complete MERIS RR and AATSR reprocessed datasets and newer data.

It allows the selection of a geographical area, the visualisation of the list of available products and the Quick-Looks and the download of one or more files up to a volume of 1 GB (25 to 50 files, depending on the size of the area of interest) corresponding to the time and area of interest. The tool is going to be upgraded to allow download of larger volumes of data.

■ **Delivery via satellite (DDS)**

The DDS (Data Dissemination System) is a dissemination via the Eutelsat W1 satellite, using the Digital Video Broadcasting (DVB) standard, to receivers located at user's premises across Europe.

More detailed information on the DDS can be found at the address given below:

http://dwlinkdvb.esrin.esa.it/DDS/welcome.html. (The "general information" section and the ESA Bulletin do not require a password). The DDS is intended to deliver NRT products right after their generation, from both the ESRIN and Kiruna stations. Reception is on a 24hrs basis via a commercial TV dish antenna connected to a dedicated PC equipped with a DVB card. ESA will provide 24hrs monitoring and support via the Internet for PCs with a fixed IP address.

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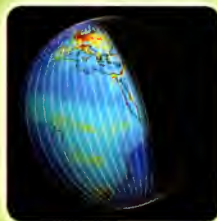
HOW TO ACCESS ENVISAT DATA

5. HOW TO ACCESS ENVISAT DATA

This chapter describes the various tools for access to Envisat data.

5.1 ON-LINE ACCESS

A large volume of Envisat data are now available systematically on-line; see the instrument specific sections below for the details. As mentioned in section 4.2.4, the products may be distributed over the following facilities:

- the RA (Rolling Archive)
- the EWFS (ENVISAT Web File Server)
- the DDS (Data Dissemination System)
- the Stations or PACs FTP Servers
- the FTP on-request service
- MERCI

Whenever applicable, EOHelp will provide you at Project start-up (or on-request during the project), with username, password and the server address where to download the products from.

5.2 DATA ORDERING

If the products are not available systematically on-line and have to be ordered, the EOLI-SA tool shall be used. Browsing the data catalogue is possible by logging as an anonymous user while an account is necessary to place an order.

5.2.1 CONTACT POINT

The ESA Earth Observation Help and Order Desk ("EOHelp"), located at ESA/ESRIN, is the contact point for any information request on data access, data catalogues, ordering tools and data dissemination.

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EOHelp can be reached at eohelp@eo.esa.int or via http://earth.esa.int/contactus, and is open during working days from Monday to Thursday, 8:30 to 17:15 and on Friday, from 8:30 to 16:00 (European Central Time).

Fax: 0039 06 94180 272
Telephone: 0039 06 94180 777

5.2.2 CATALOGUES AND ORDERING TOOLS

Data catalogues:

All Envisat data can be browsed through the ESA multi-mission data catalogue, EOLI, available at http://earth.esa.int/resources/catalogues. There are two versions of EOLI:

- EOLI-Web, an online multi-mission catalogue providing access to ESA's catalogues of EO products via a standard web browser. This tool doesn't allow on-line ordering but browsing the meta data and quick look images for ESA's ENVISAT, ERS and Third Party Mission products;

- EOLI-SA, a stand-alone version combining the advantages of both the on-line and off-line catalogues. It also allows visualisation of SAR interferometric searches and associated quick-looks.

For those who are used to DESCW, this catalogue is still available for browsing; it is an offline multi-mission catalogue covering ERS, Envisat and ESA Third Party missions. Regular updates of the data for use within DESCW are available via FTP.

For more information, refer to http://earth.esa.int/resources/catalogues.

HOW TO ACCESS ENVISAT DATA

Fig. 4 - EOLI-SA

Data ordering:

The data from the Envisat imaging instruments (ASAR, MERIS and AATSR) can be ordered using the EOLI-SA tool.

EOLI-SA allows direct on-line ordering of the following products:

- archived products from ASAR HR, ASAR GM, MERIS FR and AATSR
- future data acquisitions of ASAR HR and MERIS FR

A personal account is needed and is provided by EOHelp at Project start-up or on request for on-going projects.

The products are then delivered on media, on the RA or via FTP, depending on the preliminary agreements.

EOLI-SA also allows tracking the status of the order and in particular to verify whether the ASAR data acquisition request has been scheduled or is in conflict with other users.

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5.2.3 SOME ORDERING RULES

When placing an acquisition order?

In the frame of a Category-1 data use Project, requests for planning can be entered at any time but at the latest two weeks before acquisition.

Requests for Category-2 data use are instead accepted up to 2.5 working days before acquisition date. Such a short-notice planning is subject to rush programming fee.

What are the priorities amongst users in case of planning conflict?

The Calibration and Validation team has priority at any time, as well as any emergency linked to satellite and instruments safety.

Up to 15 days ahead of acquisition, a Category-2 request will cancel a Category-1 request while Category-1 users are served on a first come, first served basis. It is therefore recommended that they place their orders as early as possible.

Within 14 days from acquisition, when a new Category-2 request enters in conflict with an existing Category-1 order, EOHelp handles a negotiation with the existing user.

How the user is informed about his acquisition request being accepted or cancelled?

The status of the orders placed with EOLI-SA can be checked in the Orders Panel; requests for clarification can be sent to EOHelp.

Please note that a cancellation can always happen up to 15 days before acquisition time and more exceptionally up to 2.5 days before acquisition because of higher priority requests. The user is informed of cancellations as soon as they are known. In case of cancellation due to a conflict, the winning planning is proposed and the user, whose order was cancelled, can accept if it satisfies his needs.

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5.3 ACCESS TO ASAR HR DATA

5.3.1 ORDERING ASAR FUTURE ACQUISITIONS

As explained in section 4.2.1, ordering for future acquisitions is only needed for ASAR HR modes (ASAR IM, ASAR AP, ASAR WS) and it is only allowed from users who have a Project with a quota allocated for future acquisitions. Ordering shall be done using EOLI-SA, as described in Section 5.2.2. The order shall include the instrument settings required (mode, polarisation, swath), the start/stop time of the acquisition required to cover the area of interest and the final product type as well as the scene size when applicable. If a medium resolution product is required from ASAR, an "acquisition only" request shall be placed, as the production will be automatic and the product can be picked up on the Rolling Archive at no cost; only the programming fee will apply.

5.3.2 DELIVERY OF ASAR HR PRODUCTS

The delivery option is specified at the time of ordering, using EOLI-SA.

The ASAR products are available in the following ways:

1. **On media** (CD-Rom or DVD-Rom, depending on the product size – one or more products per media). This is applicable to all product types, archived products or future acquisitions.

In case of urgency, the product is generated as soon as possible following the acquisition at the station.

2. **Via Internet**

Whenever the order includes an acquisition request, the corresponding product can be made available in the on-line archive of the acquisition station or via FTP pick-up. In this way, all ASAR Level 1 products, generated systematically or on-request, are available at the stations where the data have been acquired for a period of 7 to 15 days from generation time as follows:

- in the " ASAR systematic" directory of the Rolling Archive or via the EWFS, when the product is generated systematically. This is the case of the Medium Resolution products ASA_WSM_1P,

ASA_IMM_1P and ASA_APM_1P. Only a planning request is needed from the user.
In nominal situation, the product is available within 3 hours from acquisition.

- in the "ASAR on request" directory of the Rolling Archive or via the EWFS, when the product is
  generated following a user request. This is the case of the High Resolution Level 1 products:
  ASA_IMP_1P, ASA_IMS_1P, ASA_IMG_1P,
  ASA_APP_1P, ASA_APS_1P, ASA_APG_1P.
In nominal situation, the product is available within the same day of the acquisition.

- in an order-specific account for products smaller than 2 GB (FTP pick-up).
The user receives notification of the products availability and location in an E-mail. The product is
generated as soon as possible after acquisition, depending on processing load at the center.

If the request is instead for an archived product, it can be made available from the acquisition station
(recent acquisitions) or from a PAC (older acquisitions). In all cases, media and FTP pick-up delivery
methods are available as for new acquisitions.

The table summarizing the ASAR HR products availability is available in Section 7.1.

5.4 ACCESS TO ASAR LR PRODUCTS

The ASAR LR products can be received:

1- **On-request**, by placing an order for a few archived products, using EOLI-SA for ASA_GM1_1P products or sending an E-mail to EOHelp for ASA_WVI_1P products.

The E-mail shall include:

- The user project code ID
- The product type requested, the time period, the area of interest
- The preferred delivery support medium, if applicable

Products are in this case delivered on media (CD-Rom or DVD-Rom, depending on the size of the order).

2- **Systematically**, as a user of an on-line dissemination

Access information shall be requested to EOHelp, specifying your user project code ID. Access will be provided to the stations FTP servers, RA or EWFS, depending on the product type:

- Stations FTP servers (7 days retention time)

    They host 7 days of Wave Mode Meteo products: ASA_WVS_1P and ASA_WVW_2P both in Envisat and BUFR formats as well as 7 days of Global Monitoring Mode (GMM): ASA_GM1_1P.

- RA or EWFS (7 days retention time)

    The ASAR Global Monitoring Mode (GMM) products: ASA_GM1_1P are visible via the Rolling Archive (in the ASAR GM1 systematic folder) and the EWFS.

3- **Systematically, on DVD**

The NRT ASA_WVI_1P can be delivered systematically, using a subscription on DVD, for all future acquisitions or a period of time in the future (from PAC, with a few weeks delay).

The registration request shall be sent to EOHelp following Project acceptance. The user is then inserted in the distribution list for systematic media delivery.

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Note

Reprocessed dataset:

The complete archive of ASA_WVI_1P products (Dec. 2002 onwards) has been reprocessed and the ASA_WVS_1P and ASA_WVW_2P dataset is available to the users on a FTP server at the processing center. Information on how to access these data can be requested to EOHelp.

The table summarizing the ASAR LR products availability is available in Section 7.2.

5.5 ACCESS TO MERIS FR DATA

5.5.1 ORDERING MERIS FR FUTURE ACQUISITIONS

As explained in section 4.2.1, this is only required for MERIS FR operations. Ordering shall be done using EOLI-SA, as described in Section 5.2.2. The order shall include the coordinates of the scene center, the scene size and the final product type required.

5.5.2 DELIVERY OF MERIS FR PRODUCTS

The delivery option (media or FTP pick-up) shall be specified at the time of ordering, using EOLI-SA. If the product is systematically available in the Rolling Archive, a request for "acquisition only" is to be submitted.

The MERIS FR products are available in the following ways:

1- **On media** (CD-Rom or DVD-Rom, depending on the product size – one or more products per media) This is applicable to Level 1 and Level 2 products, archived products or future acquisitions. In case of urgency, the product is generated as soon as possible following the acquisition at the station.

2- **Via Internet**

Whenever the order includes an acquisition and production request, the resulting product can be

made available both at the acquisition station or at a PAC, via FTP pick-up delivery method. The user receives notification of the products availability and location in an E-mail. The product is generated as soon as possible after acquisition, depending on processing workload at the center.

If the request is instead for an archived product, it can be made available from the acquisition station (recent acquisitions) or from a PAC (older acquisitions). In all cases, media and FTP pick-up delivery methods are available as for new acquisitions.

The table summarizing the MERIS FR products availability is available in Section 7.3.

5.6 ACCESS TO MERIS RR PRODUCTS

The MERIS RR products can be received:

1- **Systematically**, as a user of an on-line dissemination.

Access information shall be requested to EOHelp, specifying your user project code ID.

Access will be provided to the Stations FTP servers, RA, EWFS or MERCI, depending on the product type and the area of interest:

■ Station FTP servers - (7-days retention time)

This is applicable to the MERIS RR Meteo products: MER_LRC_2P in both Envisat and BUFR formats.

■ RA or EWFS: (7-days retention time)

The MERIS RR Level 1 and 2 products MER_RR__1P and MER_RR__2P, MER_RRC_2P, MER_RRV_2P, systematically generated at the acquisition station, are available in the "MERIS systematic" folder of the RA or via the EWFS.

■ via MERCI, for the reprocessed dataset and the newer acquisitions as from July 2006 (full mission)

The complete MERIS RR dataset, from mid-2002 to June 2006 has been reprocessed; the full archive is available on-line via the MERCI interface (see description in 4.2.4).

For access to MERCI, please contact EOHelp.

Fig. 5 - MERCI (MERIS Catalogue and Inventory)

2- **Systematically**, as a user of a DVD subscription.

For all future acquisitions or a period of time in the future; this is applicable to MER__RR__1P and MER_RR__2P. The registration request shall be sent to EOHelp following project acceptance.

3- **Systematically**, as a user of the DDS.

This applies to all product types, MER_RR__1P, MER_RR__2P, MER_RRC_2P and MER_RRV_2P.

Information about setting up a DDS receiving station and/or access to products is available from EOHelp.

Note

MERIS RR catalogue can be browsed using EOLI-SA but ordering has been disabled since all data are available on-line via the MERCI interface.

The table summarizing the MERIS RR products availability is available in Section 7.4.

5.7 ACCESS TO AATSR DATA

The AATSR products can be received:

1- **On-request**, by placing an order for a few archived products, using EOLI-SA*.
Products are in this case delivered on media (CD-Rom or DVD-Rom, depending on the product size) or via FTP pick-up.

2- **Systematically**, as a user of an on-line dissemination.
Access information shall be requested to EOHelp, specifying your user project code ID. Access will be provided to the stations FTP servers, RA, EWFS or MERCI, depending on the product type:
- Stations FTP servers (7-days retention time)

This is applicable to the AATSR Meteo product: ATS_MET_2P (Envisat or BUFR format).

- RA or EWFS (7-days retention time)

The AATSR Level 1 product ATS_TOA_1P and AATSR Level 2 Products ATS_AR__2P and ATS_NR__2P are available in the "AATSR systematic" folder of the RA or via the EWFS.

- via MERCI

For the reprocessed dataset and the newer acquisitions as from July 2007 (ATS_TOA_1P and ATS_NR__2P). The complete AATSR mission, from mid- 2002 to mid-2007, has been reprocessed. The full archive is being made available on-line via the MERCI interface (see description in 4.2.4). For access to MERCI, please contact EOHelp.

3- **Systematically**, as a user of a DVD subscription for all future acquisitions or a period of time in the future (from PAC).

This is applicable to the AATSR Level 1 consolidated product ATS_TOA_1P and the AATSR Level 2 consolidated products ATS_AR__2P and ATS_NR__2P.
The registration request shall be sent to EOHelp following Project acceptance. The user is then inserted in the distribution list for systematic media delivery.

* ordering will be disabled once the complete dataset will be available via the MERCI interface

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4- **Systematically**, as a user of the DDS

For the NRT AATSR Level 1 product ATS_TOA_1P and the NRT AATSR Level 2 Products ATS_AR__2P and ATS_NR__2P.

Information about setting up a DDS receiving station and/or access to products is available from EOHelp.

The table summarizing the AATSR products availability is available in Section 7.5.

5.8 ACCESS TO ALTIMETRY DATA (RA-2, DORIS)

5.8.1 RA-2

The RA-2 products can be accessed:

1- **On request**, by placing an order for a cycle of products or more, sending an E-mail to EOHelp.

Products are in this case delivered on media (DVD-Rom) for RA2_GDR_2P and RA2_MWS_2P.

2- **Systematically**, as a user of a NRT on-line dissemination (7-days retention time).

Access information shall be requested to EOHelp, specifying your user project code ID.

Access will be provided to the stations FTP servers for:

    RA-2 NRT product: RA2_FGD_2P

    RA-2 Meteo product: RA2_WWV_2P (Envisat and BUFR format).

3- **Systematically**, as a user of an off-line FTP dissemination (full mission).

Access information shall be requested to EOHelp, specifying your user project code ID.

Access will be provided to the PAC FTP server for:

    RA-2 off-line products: RA2_IGD_2P, RA2_GDR_2P

                    RA2_WWV_2P

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4- **Systematically**, as a user of a DVD subscription.

RA-2 off-line products: RA2_GDR_2P, RA2_MWS_2P

The registration request shall be sent to EOHelp following Project acceptance. The user is then inserted in the distribution list for media delivery.

Note

Reprocessed dataset:

Cycles 9 to 15 from the RA-2 archive have been reprocessed. Access is provided on request, on media.

The table summarizing the RA-2 products availability is available in Section 7.6.

5.8.2 DORIS

The two DORIS auxiliary data files, DOR_VOR_AX and DOR_POR_AX are available on the ESRIN FTP server for a period of 3 months. Access information shall be requested to EOHelp, specifying your user project code ID.

5.9 ACCESS TO SCIAMACHY DATA

The complete dataset of SCIAMACHY products is available on-line as follows:

1- **The NRT Level 1 products** (SCI_NL__1P) can be retrieved from the stations FTP servers where the products are kept for 7-days. Generation of Level 2 NRT products is currently interrupted.

Alternatively, level 1 NRT products (SCI_NL__1P) can be received via the DDS.

Information about setting up a DDS receiving station is available from EOHelp.

2- **The off-line products** can be retrieved from the processing and archiving center (PAC) FTP server, that is:

SCIAMACHY consolidated/reprocessed level 1 product: SCI_NL__1P

SCIAMACHY off-line product: SCI_OL_2P

Access information shall be requested to EOHelp, specifying your user project code ID. Access will be

provided to the station or to the PAC FTP server as applicable.

Note

Reprocessed dataset:

The SCIAMACHY archive, from August 2002 to September 2007 has been reprocessed. Access is provided on the PAC FTP server, as for nominal products.

The table summarizing the SCIAMACHY products availability is available in Section 7.7.

5.10 ACCESS TO MIPAS DATA

The MIPAS products can be received:

1- **Systematically**, as a user of an on-line dissemination.

Access information shall be requested to EOHelp, specifying your user project code ID. Access will be provided to the station or to the PAC FTP server, as follows:

- Station FTP server (7-days retention time
  MIPAS level 1 products: MIP_NL__1P
  MIPAS level 2 products: MIP_NL__2P (currently interrupted)
  MIPAS Meteo product: MIP_NLE_2P, ENV and BUFR formats (currently interrupted).

- PAC FTP sever (historical dataset, full mission)
  MIPAS Level 2 product: MIP_NL__2P
  MIPAS Level 1 product: MIP_NL__1P

2- **Systematically**, as a user of DDS.

MIPAS Level 1 product: MIP_NL__1P

Information about setting up a DDS receiving station and/or access to products is available from EOHelp.

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Note

Reprocessed dataset:

The MIPAS archive, from July 2002 to March 2004, has been reprocessed. Access is provided on the German PAC FTP server, as for nominal products.

The table summarising the MIPAS products availability is available in Section 7.8.

5.11 ACCESS TO GOMOS DATA

The GOMOS products can be received:

1- **On-request**, by sending an e-mail to EOHelp for very small orders of GOMOS level 1 products (GOM_TRA_1P and GOM_LIM_1P).

Products are in this case delivered on media (DVD-Rom).

2- **Systematically**, as a user of an on-line dissemination

Access information shall be requested to EOHelp, specifying your user project code ID. Access will be provided to the stations server or to the PAC FTP server:

- Stations FTP servers (7-days retention time)

   GOMOS Level 1 products: GOM_TRA_1P and GOM_LIM_1P

   GOMOS Level 2 product: GOM_NL__2P

   GOMOS Meteo Product: GOM_RR__2P, ENV and BUFR formats

- PAC FTP server (historical dataset, full mission)

   GOMOS Level 2 product: GOM_NL__2P

3- **Systematically**, as a user of a DVD subscription for all future acquisitions or a period of time in the future (from ESA Acquisition stations and PAC).

   GOMOS Level 1 products: GOM_LIM_1P and GOM_TRA_1P (NRT product)

The registration request shall be sent to EOHelp following Project acceptance. The user is then inserted in the distribution list for systematic media delivery.

Note

Reprocessed dataset:

The GOMOS archive, from August 2002 to July 2006, has been reprocessed. Access to Level 2 products is provided on the PAC FTP server, as for nominal products.

The table summarising the GOMOS products availability is available in Section 7.9.

6. HOW TO GET HELP

The ESA's EO User Services in ESRIN, Italy, is the entity ensuring a user-friendly interface between the satellite system and the data users. Services provided to users include:

- On-line information services (Earthnet online, EO Portal and Disasters Charter including documentation)
- General Help services from the EO Help Desk team (EOHelp)
- On-line catalogue ordering via EOLI-SA
- Order Handling, inquiries and support
- Mission planning and production planning

The interfaces to the Users are presented here below.

6.1 HELP SERVICES

Information on the missions, instruments, catalogues, ordering tools, products tools, data products and how to access them is available at http://earth.esa.int/. In addition, the ESA Earth Observation Help and Order Desk ("EOHelp") is the contact point for requests of information and clarification on ESA and Third Party Missions.

6.2 ORDER HANDLING

The EOHelp team is also responsible for the handling of on-request orders (from order validation to order closure) and is the point of contact to request clarification on an order status. The team also provides access to datasets systematically available on-line.

6.3 DOCUMENTATION

Any request for documentation shall be sent to EOHelp. Full list of the documents available can be found at: http://earth.esa.int/resources/documentation/.

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6.4 USER COMPLAINTS

Whenever a user is not satisfied with the delivered product(s) or service, he/she shall send an E-mail to EOHelp with the following information:

- Project Code ID
- User ID
- Order ID (if applicable)
- Product affected
- Description of the anomaly

EOHelp might request the product to be sent back for investigation. If the problem is confirmed, the product will not be charged to the project (financially and quota wise).

6.5 CONTACT POINT

EOHelp can be reached during working hours from Monday to Thursday, 8:30 to 17:15 and on Friday, from 8:30 to 16:00 (European Central Time).

Fax: 0039 06 94180 272

Telephone: 0039 06 94180 777

E-mail: eohelp@eo.esa.int

Web: http://earth.esa.int/contactus

HOW TO GET HELP

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PRODUCTS
AVAILABILITY
SUMMARY TABLES
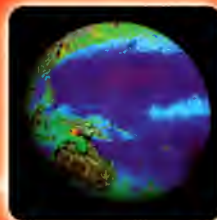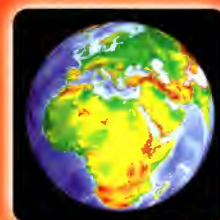
7. PRODUCTS AVAILABILITY SUMMARY TABLES

7.1 ASAR HR PRODUCT

PRODUCT DESCRIPTION			AVAILABILITY		
Product name	Product acronym	Max. size per scene (100 km length) (MB)	Distribution type	Validity date	Distribution type (retention time)
Image mode					
Level 0		ASA_IM__0P	186	On request Planning and Production	From 18 Oct. 2002	DVD or FTP pick-up (up to 75 sec)
Level 1	SLC	ASA_IMS_1P	740			DVD or RA/EWFS (7 days) or FTP pick-up
	PRI	ASA_IMP_1P	134			DVD or RA/EWFS (7-15 days) or FTP pick-up
	Geocoded	ASA_IMG_1P	281			
	Medium Resolution	ASA_IMM_1P	4	On request Planning Systematic Production		

PRODUCT DESCRIPTION			AVAILABILITY		
Product name	Product acronym	Max. size per scene (100 km length) (MB)	Distribution type	Validity date	Distribution type (retention time)
Alternating **Polarisation Mode**					
Level 0 HH/VV HH/HV VV/VH	ASA_APC_0P ASA_APH_0P ASA_APV_0P	186	On request Planning and Production	From 13 Nov. 2002	DVD or FTP pick-up (up to 75 sec)
Level 1 SLC	ASA_APS_1P	1480			DVD or RA/EWFS (7-15 days) or FTP pick-up
Geocoded	ASA_APG_1P	562			
PRI	ASA_APP_1P	268			
Medium Resolution	ASA_APM_1P	8	On request Planning Systematic Production		
Wide Swath Mode					
Level 0	ASA_WS__0P	709	On request Planning and Production	From 30 Oct. 2002	DVD (max. 300 sec.) or FTP pick-up (max. 60 sec.)
Level 1 Medium Resolution	ASA_WSM_1P	59	On request Planning Systematic Production		DVD or RA/EWFS (15 days) or FTP pick-up (max. 150 sec)
SLC	ASA_WSS_1P	1800	On request Planning and Production		DVD or FTP pick-up

7.2 ASAR LR PRODUCTS

PRODUCT DESCRIPTION			AVAILABILITY				
Product name	**Product acronym**	**Max. size per orbit (MB)**	**NRT at PDHS (system/ retention time)**	**Consolidated at D-PAC**		**Reprocessed at F-PAF**	
				Validity date	**Distribution type**	**Validity date**	**Distribution type**
Wave mode							
Level 1 SLC	ASA_WVI_1P	2400 max.	-	From 17 Dec. 2002	On request CD/DVD	-	-
				Future acquisitions	Systematic DVD		
Level 1 Cross spectra (meteo product)	ASA_WVS_1P	2	FTP (7 days) ENV and BUFR formats	-	-	From 17 Dec. 2002 up to Spring 2007	FTP
Level 2 Cross spectra (meteo product)	ASA_WVW_2P	2	FTP (7 days) ENV and BUFR formats	-	-		
Global Monitoring Mode							
Level 1	ASA_GM1_1P	146 max. (1 segment)	FTP (7 days) RA/EWFS (7 days)	From 1 Jan. 2004	On request CD/DVD	-	-

7.3 MERIS FR PRODUCTS

PRODUCT DESCRIPTION			AVAILABILITY	
Product name	Product acronym	Max. size (MB)	Validity date	Distribution type
MERIS Full Resolution Level 1b and Level 2 (1 scene, 650 x 582 Km length) (1 imagette, 334 x 300 km length)	MER_FR__1P MER_FR__2P	156 (1 scene) 40-50 (1 imagette)	from 15 June 2002 Future acquisitions	CD-Rom, DVD or FTP pick-up CD-Rom, DVD or FTP pick-up
MERIS Full Resolution Full Swath Level 1B and Level 2	MER_FRS_1P MER_FRS_1P	500	from 15 June 2002 Future acquisitions	DVD or FTP pick-up DVD or FTP pick-up or Rolling Archive (7 days retention time for European and North America coverages)

7.4 MERIS RR PRODUCTS

PRODUCT DESCRIPTION				AVAILABILITY				
Product name	Product acronym	Max. size per orbit (MB)	NRT at PDHS (system/ retention time)	Consolidated		Reprocessed		
				Validity date	Distribution type	Validity date	Distribution type	
MERIS RR Level 1b	MER_RR__1P	537 (1 orbit) 45 (1 scene)	DDS RA/EWFS (7 days) Systematic DVD (off-line)	From 1 July 2006	MERCI tool	17/06/2002 to 30/06/2006	MERCI tool	
MERIS RR Level 2	MER_RR__2P	621 (1 orbit) 47 (1 scene)	DDS RA/EWFS (7 days) Systematic DVD (off-line)	from 1 July 2006	MERCI tool	-		
MERIS RR Level 2 Cloud thickness & water vapour	MER_RRC_2P	104	DDS RA/EWFS (7 days)	-	-	-	-	
MERIS RR Level 2 Vegetation indices	MER_RRV_2P	87	DDS RA/EWFS (7 days)	-	-	-	-	
MERIS RR Level 2 Cloud tickness & later vapour	MER_LRC_2P	9	FTP (7 days) ENV and BUFR formats	-	-	-	-	

7.5 AATSR PRODUCTS

PRODUCT DESCRIPTION			AVAILABILITY				
Product name	Product acronym	Max. size per orbit (MB)	NRT at PDHS (system/ retention time)	Consolidated at UK-PAC		Reprocessed at UK-PAC	
				Validity date	Distribution type	Validity date	Distribution type
Gridded Brightness Temperature and Reflectance	ATS_TOA_1P	10 (scene) 764 (orbit)	DDS RA/EWFS (7 days)	From July 2007	MERCI tool	July 2002 to July 2007	MERCI tool
Geophysical Product for Ocean, Land and Atmosphere	ATS_NR__2P	2 (scene) 133 (orbit)	DDS FTP (7 days) RA/EWFS (7 days)	From July 2007	MERCI tool	July 2002 to July 2007	MERCI tool
Spatially averaged Sea/Land Geophysical Product (AST)	ATS_AR__2P	62 (orbit)	DDS FTP (7 days) RA/EWFS (7 days)	From July 2007	On request CD/DVD/FTP pick-up	July 2002 to July 2007	On request CD/DVD/FTP pick-up
Spatially Averaged Sea Surface Temperature (AST) for meteo users	ATS_MET__2P	5 (orbit)	FTP (7 days) ENV and BUFR formats	-	-	-	-

7.6 RA-2 PRODUCTS

PRODUCT DESCRIPTION			AVAILABILITY				
Product name	Product acronym	Max. size per orbit (MB)	NRT at PDHS (system/ retention time)	Consolidated at F-PAC		Reprocessed at F-PAC	
				Validity date	Distribution type	Validity date	Distribution type
Fast Delivery Geophysical Data Record	RA2_FGD_2P	14	FTP (7 days)	-	-	-	-
Intermediate Geophysical Data Record	RA2_IGD_2P	7 (1/2 orbit)	-	from 28 April 2003	FTP (permanent)	-	-
Geophysical Data Record	RA2_GDR_2P	7 (1/2 orbit)	-	from 28 April 2003	FTP (permanent) / On request or systematic DVD	26/08/2002 to 28/04/2003	FTP (permanent) / DVD
Sensor Data Record	RA2_MWS_2P	40 (1/2 orbit)	-	from 28 April 2003	On request or systematic DVD	26/08/2002 to 28/04/2003	DVD
Wind/Wave Product (Meteo Product)	RA2_WWV_2P	2 (orbit)	FTP ENV. and BUFR format (7 days)	from 28 April 2003	On request via FTP or media (NRT product)	From 26/08/2002	FTP (permanent) (F-PAC product)

7.7 SCIAMACHY PRODUCTS

PRODUCT DESCRIPTION			AVAILABILITY				
Product name	Product acronym	Max. size per orbit (MB)	NRT at PDHS (system/ retention time)	Consolidated at D-PAC		Reprocessed at D-PAC	
				Validity date	Distribution type	Validity date	Distribution type
Localised Atmospheric Spectra	SCI_NL__1P	205	DDS FTP (7 days)	From 25/09/ 2007 onwards	FTP (permanent)	2/08/2002 to 24/09/2007	FTP (permanent)
Vertical Column Amounts of various trace gases	SCI_NL__2P	6	FTP (7 days) (3)	-	-	-	-
Selected Vertical Column amounts extracted from SCI_NL__2P	SCI_RV__2P	0.2	FTP (7 days) Envisat format and BUFR format	-	-	-	-
Vertical Column amounts and Vertical Profiles of various trace gasses	SCI_OL__2P	18	-	From 25/09/ 2007 onwards	FTP (permanent)	2/08/2002 to 24/09/2007	FTP (permanent)

(3) NRT service was stopped on 8 May 2006

7.8 MIPAS PRODUCTS

PRODUCT DESCRIPTION			AVAILABILITY				
Product name	Product acronym	Max. size per orbit (MB)	NRT at PDHS (system/ retention time)	Consolidated at D-PAC		Reprocessed at D-PAC	
				Validity date	Distribution type	Validity date	Distribution type
Geolocated and Calibrated Spectra	MIP_NL__1P	312	DDS	From 09/08/ 2004 to 17/09/2004 with gaps And from 10/01/2005 [1]	FTP (permanent)	From 01/07/2002 to 26/03/2004	FTP (permanent)
Temperature, Pressure and Atmospheric Constituents Profiles	MIP_NL__2P	6	FTP [2] (7 days)	From 09/08/ 2004 to 17/09/2004 (with gaps)	FTP (permanent)	From 01/07/2002 to 26/03/2004	FTP (permanent)
Temperature, Pressure and Atmospheric Constituents Profiles for Meteo Users	MIP_NLE_2P	0.6	FTP (7 days) Envisat format and BUFR format	-	-	-	

[1] *with theoretical duty cycle increasing from 35% to currently 100%*

[2] *In red, the suspended distributions, due to interruption of nominal instrument operations since 26 March 2004*

7.9 GOMOS PRODUCTS

PRODUCT DESCRIPTION			AVAILABILITY				
Product name	Product acronym	Max. size per orbit (MB)	NRT at PDHS (system/ retention time)	Consolidated at D-PAC		Reprocessed at D-PAC	
				Validity date	Distribution type	Validity date	Distribution type
Geolocated and Calibrated Transmission Spectra	GOM_TRA_1P	22.8	FTP (7 days) or Systematic DVD (off-line)	From 5 July 2006	Contact EOHelp	26 August 2002 to 04 July 2006	Contact EOHelp
Geolocated and Calibrated Background Spectra	GOM_LIM_1P	14.4	FTP (7 days) or Systematic DVD (off-line)		Contact EOHelp	26 August 2002 to 04 July 2006	Contact EOHelp
Temperature and Atmospheric Constituents Profiles	GOM_NL__2P	0.6	FTP (7 days)		FTP (permanent)	26 August 2002 to 04 July 2006	FTP (permanent)
Extracted Profiles for Meteo Users	GOM_RR__2P	1	FTP (7 days) Envisat format and BUFR format	-	-	-	-

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