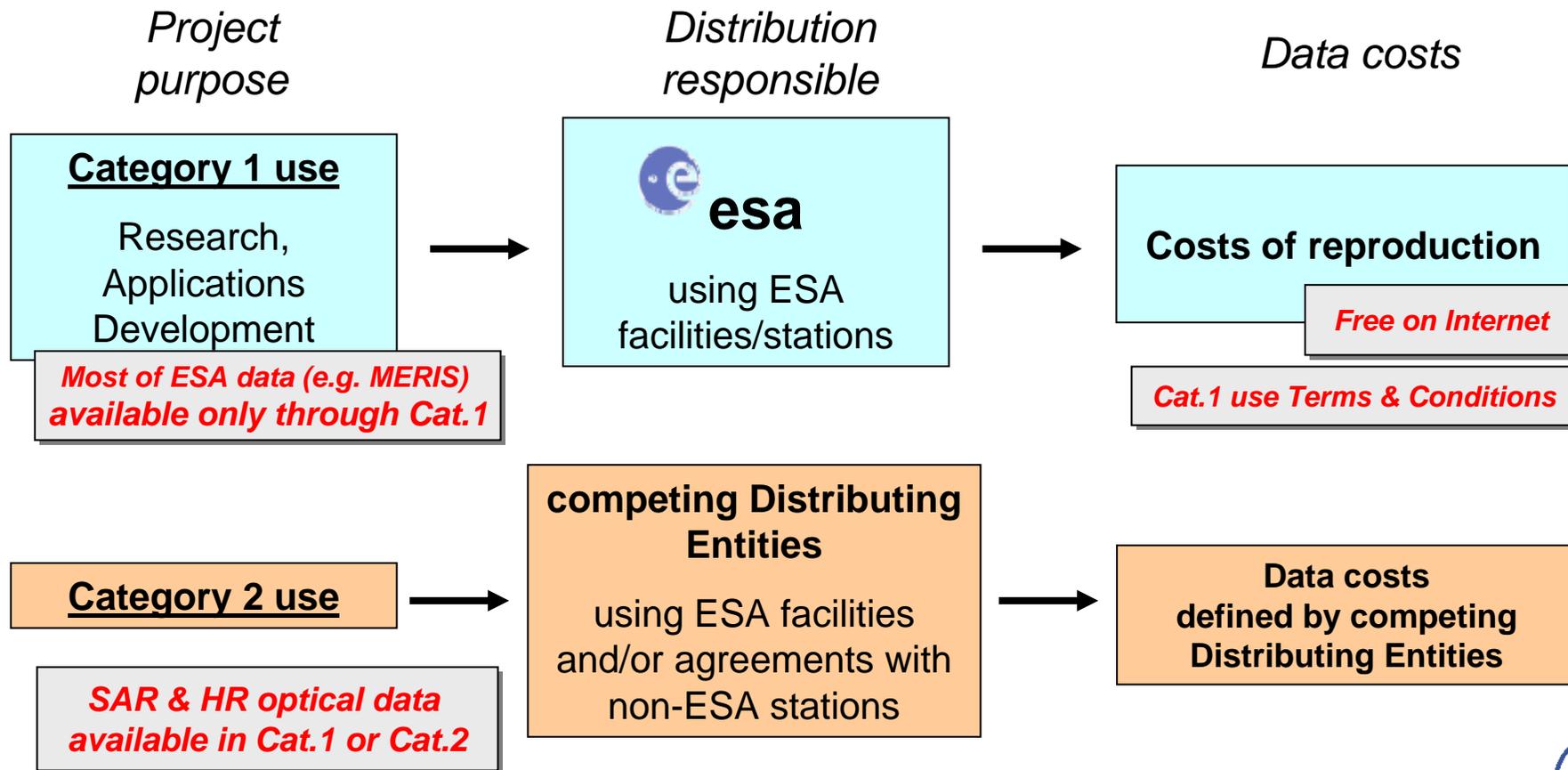


Access to ESA Earth Observation data

(past and current missions)

Data policy defined by ESA Member States:

- ❑ 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.



Main points:

- to use the data provided for Category 1 use only **within the project team** (i.e. PI and co-PIs) and only for the purpose described in the project proposal
→ i.e. no data redistribution outside the Cat.1 use project team
- to widely **publish** the project results in **scientific publications** or presentations,
→ with data citation:
“[mission or instrument] Data provided by European Space Agency”
(to facilitate ESA web searching of publications, and subsequent reporting on mission/instrument achievements)

Each PI shall sign the Category 1 use Terms & Conditions.

How to apply for data access within a Category 1 use framework

Application for Category 1 use data access can be submitted to ESA at any time using the ESA Earth Observation Principal Investigator portal (<http://eopi.esa.int>)

The screenshot shows the ESA Earth Observation Principal Investigator Portal. At the top right, a callout box contains the URL <http://eopi.esa.int>. The main page features a navigation sidebar on the left with categories like 'Data Access', 'Update & Reporting', 'Results & News', and 'Information'. The 'Data Access' section is highlighted with a blue box. The main content area is divided into 'Principal Investigator', 'Evaluator', 'Correspondent', and 'Contact us' tabs. It displays various articles and news items, such as 'Surface movements in Bologna (Po Plain, Italy) detected by multitemporal DInSAR' and 'Ground motion induced by lake level fluctuations in western USA'. A 'Results & News' section includes a search bar and a 'Main search' button. The bottom of the page features a 'Living Planet' logo and copyright information.



The screenshot shows the ESA Earth Observation Principal Investigator Portal. The top navigation bar includes the ESA logo, the text 'Earth Observation Principal Investigator Portal', and a 'Contact us' link. A left-hand menu lists various categories: Data Access (highlighted with a blue box), Results & News, Information, and HOME. The 'Data Access' section is expanded to show 'How to get data', 'ESA Data Policy', 'Open AOs', and 'Previous AOs'. The main content area is divided into two sections: 'Products systematically available on Internet' and 'Products available on specific request'. The first section includes a red arrow pointing to 'Fast Registration' and text about free of charge products and fast registration requirements. The second section includes a red arrow pointing to 'Category 1 Project Proposal' and text about specific request products, cost of reproduction, and project proposal requirements. At the bottom, there are sections for 'Campaigns' and 'Announcements of Opportunity' with a corresponding logo.

Products systematically available on Internet

→ Fast Registration

Free of charge products

Fast registration required, with no deadline for submission. ESA Terms and Conditions to be signed.

Products available on specific request

(e.g. i.e. specific instrument tasking, products not generated systematically, products not available on Internet)

→ Category 1 Project Proposal

Available at cost of reproduction (ENVISAT, ERS and Third Party Missions)

Project proposal required, with no deadline for submission, to be evaluated by the Category-1 Scientific Advisory Group

Specific restrictions to the use of data may apply for Third Party Missions

If accepted by ESA, Terms and Conditions to be signed

[Register for the ESA Campaigns data](#)

Campaigns

Products offered within an ESA Announcement of Opportunity (AO)

Available following the specific rules set in the Main Text of the AO (normally free of charge)

Project proposal required, fitting objectives, restrictions and deadlines of the AO, to be evaluated by the AO Scientific Advisory Group

If accepted by ESA, Terms and Conditions to be signed

Click the logo for information about open AOs



Products systematically available on Internet

02-May-2007 UT

Data Access	How to get data
ESA Data Policy	
How to get data	Products systematically available on Internet Free of charge products
Open AOs	Terms and Conditions to be signed
Previous AOs	Click the logo for more information
Update & Reporting	Fast registration to get access to the data
Results & News	
Results	Products available on specific request
News	(e.g. i.e. specific instrument tasking, products not generated systematically, products not available on Internet)
Search	
Focus on PI	Available at cost of reproduction (ENVISAT , ERS and Third Party Missions)
PI Training	Project proposal required, with no deadline for submission, to be evaluated by the Category-1 Advisory Group
Information	Specific restrictions to the use of data may apply for Third Party Missions
About this site	If accepted by ESA, Terms and Conditions to be signed
FAQ	Click the logo for more information
Related Links	Submit a full proposal
HOME	

Products from ESA Airborne Campaigns

Data acquired by ESA airborne campaigns inside and outside Europe. Resulting datasets, available on Internet or media, can be accessed by registering a request. Click the logo for more information

[Register for the ESA Campaigns data](#)

Products offered within an ESA Announcement of Opportunity (AO)

Available following the specific rules set in the Main Text of the AO (normally free of charge). Project proposal required, fitting objectives, restrictions and deadlines of the AO, to be evaluated by the Category-1 Advisory Group

If accepted by ESA, [Terms and Conditions](#) to be signed

Click the logo for information about open AOs

Products systematically generated and available via fast registration - release April 3 2007

Mission	Sensor	Product	Internet		DDS Europe
			Archived or Reprocessed	NRT and Recent	NRT
ENVISAT	ASAR	ASA_WSM_1P		last 14 days	
		ASA_IMM_1P		last 14 days	
		ASA_APM_1P		last 14 days	
		ASA_GM1_1P		last 7 days	
		ASA_WVS_1P	Full mission	last 7 days	
	ASA_WVV_2P	Full mission	last 7 days		
	MERIS	MER_RR_1P	Full mission	last 7 days	NRT
		MER_RR_2P	Full mission	last 7 days	NRT
		MER_RRC_2P	included in MER_RR_2P	last 7 days	NRT
		MER_RRV_2P	included in MER_RR_2P	last 7 days	NRT
		MER_LRC_2P	included in MER_RR_2P	last 7 days	
	MER_FRS_1P (European coverage)		last 14 days		
	AATSR	ATS_TOA_1P		last 7 days	NRT
		ATS_NR_2P		last 7 days	NRT
		ATS_AR_2P		last 7 days	NRT
	Atm. Chemistry	ATS_MET_2P		last 7 days	
		RA2_FGD_2P		last 7 days	
	Altimeter	RA2_IGD_2P	Full mission		
		RA2_GDR_2P	Full mission		
		RA2_MWS_2P	10 days of archive		
RA2_WVV_2P		Full mission	last 7 days		
RA2_WVS_2P		Full mission	last 7 days		
Atm. Chemistry	SCI_NL_1P	Full mission	last 7 days	NRT	
	SCI_NL_2P	Full mission until Nov. 2004			
	SCI_O2_2P	Full mission from Nov. 2004			
	MIP_NL_1P	Full mission			
ERS	DORIS	MIP_NL_2P	Full mission	last 7 days	
		DOR_DOP_1P	Full mission	last 7 days	
		DOR_POR_AX	Full mission	last 7 days	
	SAR	DOR_VOR_AX	Full mission	last 7 days	
		WSC.UWI	From 21/08/2003 onwards	NRT	
		SVM.UWA	From 16/11/2006 onwards	NRT	
		GOME	GOME.LVL13	From March 2005	
		GOME.LVL21	Full mission		
	Orbit	ALT.URA	From 16/11/2006 onwards	NRT	
		ORB.PRC	Full mission		
ORB.PRL		Full mission			
TPM	Chris, HRC (Proba)	PROBA.CHRS.1A	All available data, including recent		
		PROBA.HRC.1A	All available data, including recent		
	TM (Landsat)	LANDSAT.TM.SCPR	European coverage		
	EOC (Komsat-1)	KOMP.EOC.ECD	City dataset		
	ACE-ScaSat (ACE-MAESTRO)	ACE_FTS_L2V1.0	Full mission		
		ACE_FTS_L2V2.2	Full mission		
		ACE_MAESTRO_L2V	Full mission		
	MODIS (Terra/Aqua)	MODIS.NRT.Level1B (European coverage)		Last 30 days	
SeaWinds (QuikSCAT)	QSCATT.Level 2A	Full mission			
	QSCATT.Level 2B	Full mission			

Products systematically available on Internet

→

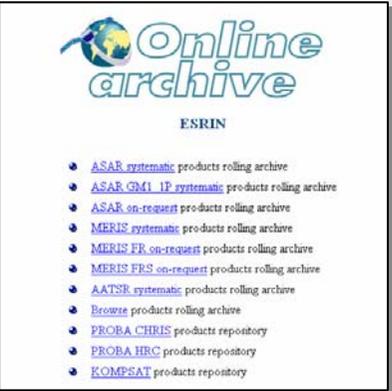
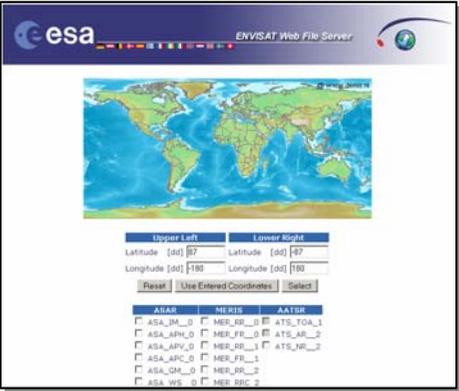
Updated list available at : <http://leopi.esa.int>

Products systematically available on Internet: example with Envisat

Envisat <u>NRT & recent data</u>		availability	period	coverage
DDS ←	MERIS Red. Resolution (1200 m) ASAR Medium Resolution (75 m) ASAR Global Monitoring (1000 m)	Systematic (i.e. processing of all data)	Rolling archive of last 7 days	Worldwide coverage
DDS ←	AATSR Altimetry	Product available within 3 hours from acquisition (95%)		
DDS ←	SCIAMACHY, GOMOS			
Internet	MERIS Full Resolution (300 m) <i>Level 1 – Europe coverage</i>	Systematic	Rolling archive of last 20 days	Europe coverage
	MERIS Full Resolution (300 m) ASAR High Resolution (12.5 m)	On request	Few hours after acquisition	According to ins. Full proposal planning
Envisat <u>archived data</u>		availability	period	coverage
	MERIS Red. Resolution (1200 m) Altimetry SCIAMACHY, MIPAS, GOMOS AATSR (<i>end 2007</i>)	Systematic (i.e. for each re-processing of the data)	Whole mission since mid-2002	Fast registration Worldwide coverage
	MERIS Full Resolution (300 m) ASAR High Rate	On request	Whole mission since mid-2002	Worldwide coverage Full proposal

Data from ESA ERS and Third Party Missions are also available on Internet

Which systems for access to NRT and recent data ?

Internet		Telecom satellite broadcast
 <p>7-days <u>Rolling Archives</u> (ftp or http)</p>	 <p>7-days <u>Web File Server</u> (http)</p>	 <p>Data Dissemination System (DDS) broadcast</p>
Same dataset for both		
<ul style="list-style-type: none"> • Complete product (e.g. MERIS orbit) • Each acquisition station has its own rolling archive 	<ul style="list-style-type: none"> • Geographical selection (with product subset to decrease data volume for download) • One unique web site for all acquisition stations 	<ul style="list-style-type: none"> • Europe reception coverage • Cost: 350 € + 1.2m antenna • Africa reception coverage (larger antenna size)
Suitable for users requesting small or infrequent dataset		Suitable for users requesting systematic and large dataset



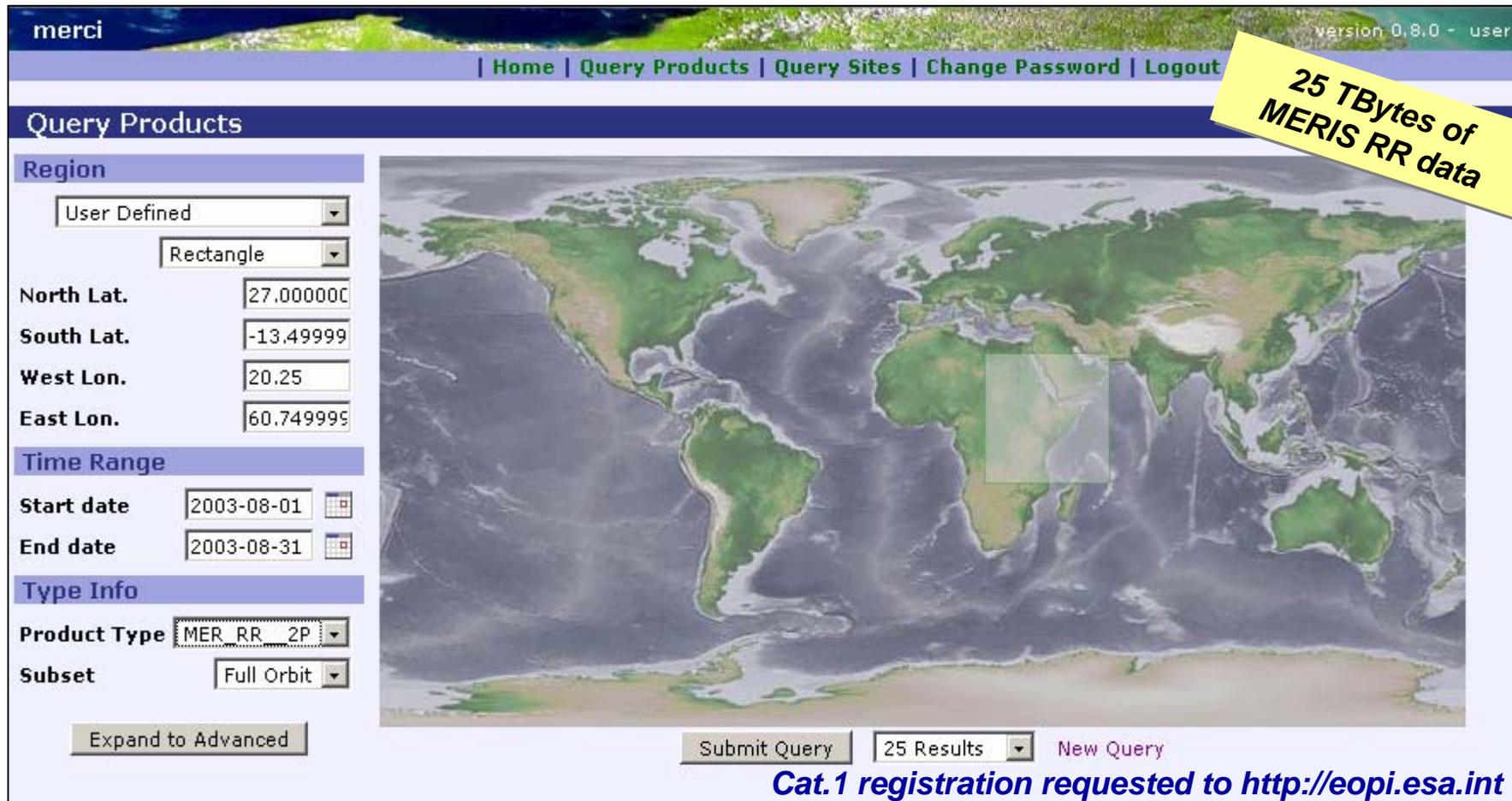
Ireland

3 May, 11:15 UTC

**Envisat MERIS Full Resolution
Level 1 products available on-line
free of charge for registered Cat.1 PI's
(rolling archive of last 30 days)
- Europe coverage only -**

Which systems for access to archived data ?

MERCI web interface, giving access to global MERIS Reduced Resolution data archived since mid-2002



merci version 0.8.0 - user

| Home | Query Products | Query Sites | Change Password | Logout

Query Products

Region

User Defined

Rectangle

North Lat. 27.000000

South Lat. -13.499999

West Lon. 20.25

East Lon. 60.749999

Time Range

Start date 2003-08-01

End date 2003-08-31

Type Info

Product Type MER_RR_2P

Subset Full Orbit

Expand to Advanced

Submit Query 25 Results New Query

Cat.1 registration requested to <http://eopi.esa.int>

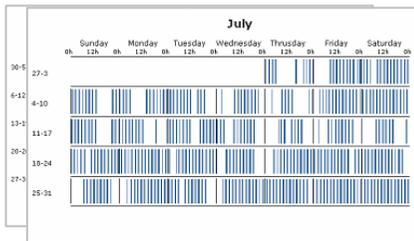
25 TBytes of MERIS RR data

MERCI web interface will be used also for Envisat/ERS (A)ATSR archived data (end 2007)

Alternative way to access to EO data:

→ Grid Processing-on-Demand (G-POD)

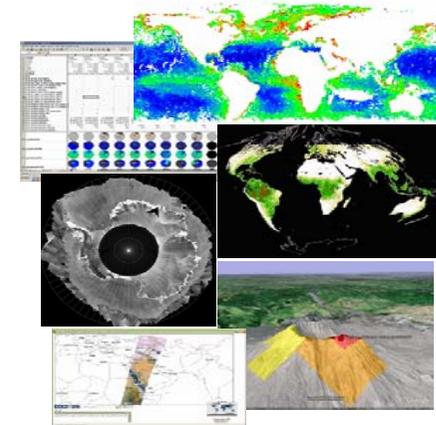
- Promote the development of new algorithms requiring large data and computing resources: *“bring the user’s algorithms to the data”*
- Build network of competences, promote e-collaboration and sharing of tools, easier transition from science algorithms to new user products ...
- 10 projects selected in mid-2006 through a Call for Proposal. Same approach will be continued in 2007/2008.



on-line data archives



user triggers and controls from the G-POD website its own processor running on eoGRID computers



innovative science products

Alternative way to access to EO data:
→ ESA EO Toolboxes

The toolboxes (Open Source tools) facilitate the handling and exploitation of EO data (e.g. experimental Level 2 algorithms).



<http://earth.esa.int/resources/softwaretools/>

<http://earth.esa.int>

eohelp@esa.int

A constant objective:

→ ease access to Earth Observation data

- ❑ **Common objective for all missions data handled by ESA:**
Envisat, ERS, Earth Explorers,
and Third Party Missions (e.g. ALOS, SPOT-4, PROBA, ...)
- ❑ **Simplified data application procedures for Category 1 use**
- ❑ **Internet access to all Near Real Time (NRT) data**
- ❑ **Internet access to archived data gradually implemented (new dataset, new access systems)**
- ❑ **Development of alternative ways to provide data (e.g. processing on demand, toolboxes)**