



Europlanet Integrated and Distributed Information Service (IDIS)

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The European planetary sciences are at a very high international standard, but the collaboration between the different fields should be improved to increase the scientific return of the related investment.

International Data network for Interdisciplinary Research

Aim of Europlanet RI:

Integrate major parts of the related distributed European infrastructure for planetary sciences like

- space exploration
- ground-based observations
- laboratory experiments
- numerical modeling teams.
- ❖ Make related resources and data available to the community

CNRS	Centre National de la Recherche Scientifique	France
FMI	Finnish Meteorological Institute	Finland
INAF	Istituto Nazionale di Astrofisica	Italy
INTA-CAB	Instituto Nacional de Técnica Aeroespacial Centro de AstroBiología	Spain
IWF-OEAW	Institut für Weltraumforschung / Österreichische Akademie de Wissenschaften	Austria
KFKI-RMKI	Research Institute for Particle and Nuclear Physics	Hungary
MPG	Max Planck Gesallschaft	Germany
OBSPARIS	Observatoire de Paris-Meudon	France
OU	The Open University	United Kingdom
TUB	Technical University Berlin	Germany
UCL	University College London	United Kingdom
UW-MAPS	University of Wales Aberystwyth	United Kingdom
VUA	Vrije Universiteit Amsterdam	Netherlands
AO	Armagh Observatory	United Kingdom

AU-MSL

University of Aarhus -
Mars Simulation Laboratory

CINECA

CINECA

DLR

Deutsches Zentrum für Luft-und Raumfahrt

FFI

Forsvarets Forsknings Institutt

IAP

Institute of Atmospheric Physics (Prague)

IKI-RAS

Space Research Institute of the
Russian Academy of Sciences

USTUTT

University of Stuttgart

IRSPS

International Research School of Planetary Science

ISSI

International Space Science Institute

JIVE

Joint Institute for VLBI in Europe

NNSU

Lobachevsky State University

ISARS-NOA

University National Observatory of Athens

UU

Utrecht University

Denmark

Italy

Germany

Norway

Czech Republic

Russia

Germany

Italy

Switzerland

Netherlands

Russia

Greece

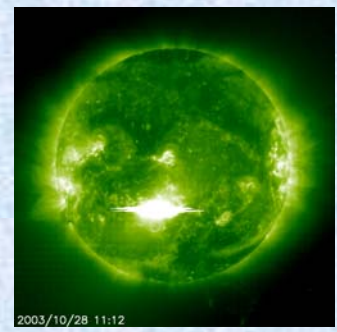
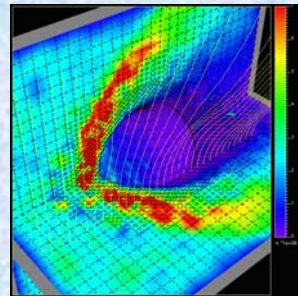
Netherlands

Example: Research objective: Atmosphere of Titan

What do we need?



Model of Plasma Environment



Solar Wind data

Spectral information



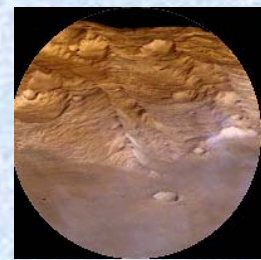
Spectral data from Cassini



In-situ data from Huygens



Plasma data from CASSINI



Surface information

**EUROPLANET
N7 - IDIS**

Presentation
Nodes
Expertises
Science Cases
HOWTO

RESOURCES Inventory :

- ERIS Definition Documents
- Add a new Resource
- View All Resources
- Search Resources (coming soon)
- Keywords

[IDIS Top Node]

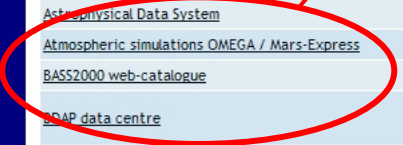
RESOURCES (167)

[ADD A NEW ONE](#)


[Display more details](#) - [Display normal view](#)
[Display with dates](#) - [Display without dates](#)

Name	Brief description
SIDC (Solar Influences Data Analysis Centre)	Latest Space Weather Data
ACE - Advanced Composition Explorer	Real Time Solar Wind data.
ALMA (Atacama Large Millimeter/Submillimeter Array)	Instrument Description homepage. Its located in the Chilean Andes and provides 80 high-precision antennas to investigate the physics of the
Analysis Software	Analysis Software for Cluster CIS, MEX Aspera, VEX Aspera instruments
Analytical facilities	Analytical facilities : ion probes, mass spectrometers, experimental petrology
Annales Geophysicae	Journal in the field of Solar Terrestrial Physics
Astrobiology Lecture Course Network	This Network provides Virtual Lectures on Astrobiology with many links and references
Astronomical Data Center (ADC)	Provides access to Astronomy Data and Catalogues hosted by the Astronomy Department of University of Maryland.
Astrophysical Data System	Digital library for Physics and Astronomy.
Atmospheric simulations OMEGA / Mars-Express	Analytical Atmospheric simulations for the spaceborne OMEGA / Mars-Express observations.
BASS2000 web-catalogue	Archives and distributes french groundbased solar observations done by several french institutions.
BDAP data centre	BDAP is a data centre regrouping to physical properties, models output, laboratory measurements, space and ground based observations.
BDIP (Base de Données d'Images Planétaires).	BDIP (Base de Données d'Images Planétaires). Historical archive of telescopic planetary images at Paris Observatory, 1870 -1977.
Bepicolombo Mission description by ESA	Bepicolombo will be launched in 2013 and its target will be Mercury
Calibration and commissioning data	Calibration and commissioning data from the GIADA instrument onboard the ESA-ROSETTA
California & Carnegie Planet Search	Interactive Catalogue of Exoplanets including related publications made by the University of California.
Canadian Astronomy Data Centre	Several Advanced Data Products and science archives supported by the Canadian Space Agency
Capability of developing planetary atmosphere modelling in N2-CH4 and N2-CO2 mix	Plasma radiation database accessible online (http://cfp.ist.utl.pt/radiation/GPRD/).
Cassini mapskp	Cassini MAPS (Magnetosphere And Plasma Science) Key Parameters database
Cassini-Huygens at DLR	Cassini-Huygens mission to Saturn and Titan, homepage dedicated the VIMS and ISS instrumentation
Cassini-Huygens at JPL	Cassini-Huygens mission to Saturn and Titan, homepage hosted by Jet Propulsion Laboratory
Cassini-Huygens at LASP	Cassini-Huygens mission to Saturn and Titan, homepage dedicated the UVIS (Ultraviolet Imaging Spectrograph) instrumentation

**Atmospheric simulation OMEGA / Mars-Express
BASS2000 web-catalogue**



EUROPLANET




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CONTACTS
Presentation
Meetings
Job opportunities
RESOURCES (N7 website)
Activities (N1-N7)
Useful links
Credits
ESA Doc service
HOWTO

PUBLIC OUTREACH

PEOPLE (296)

ORDERED REPORT

Email	Name	First name	EPN_Contact	Institute	Department (or team, or group)	Planetology speciality
	Adriano	Campo Bagatin	YES	UA		
	Agarwal	Jessica	NO	ESA	ESTEC/RSSD	
	Aittola	Marko	NO	Univ Oulu	Planetology Group, Div. Astronomy, Dept. of Physical Sciences	Planetary Geology
	Alcaraz	Christian	NO	UPS/LCP	IPG	Ionosphere Chemistry
	Allemand	Pascal	YES	CNRS/LST	Laboratoire de sciences de la Terre	planetary surfaces
	Altwegg	Kathrin	NO	Univ Bern	Weltraumforschung und Planetologie	Comets
	Ambrosius	Boudewijn	YES	TU Delft		
	Andre	Nicolas	YES	ESA	RSSD	space plasma physics, giant planet magnetospheres
	Aplin	Karen	NO	STFC	Space Science and Technology	electrical processes, atmospheres
	Apostolos	Christou	YES	Armagh Obs		
	Araujo Sa	Paulo Manuel	NO	FEUP	Physics Engineering	
	Arviset	Christophe	NO	ESA	ESA Science Operations Department	PSA development Manager
	Ascenzi	Daniela	NO	UTREDF	Physics	Ionosphere chemistry, lab support in mass spectrometry
	Atreya	Sushil	NO	Univ Michi	University of Michigan, Dept. of Atmospheric Oceanic and Space Sciences	Planetary Atmospheres, Origin and Evolution
	Aylward	Alan	YES	UCL/APL	Physics and Astronomy	Atmospheric Physics
	Ball	Andrew	NO	OU	PSSRI (Planetary and Space Sciences Research Institute)	Planetary Missions, in situ instrumentation
	Balme	Matthew	NO	OU	Earth Sciences	Planetary Surfaces
	Banaszkiewicz	Marek	YES	SRC		
	Barabash	Stas	NO	IRF	Solar system physics and space technology	Near-planet space and solar wind interaction

VOs already linked into IDIS:


- AMDA / Automated Multi-Dataset Analysis / CCSR, France)
- VSO (Virtual Space Physics Observatory / Goddard, US)
- VHO (Virtual Heliospheric Observatory / Goddard / [EGU2009-5824](#))
- VMO (Virtual Magnetospheric Observatory / Goddard / [EGU2009-11061](#))
- VO-Paris (Atmosphere, astrophysics and spectral data / Paris, France)

Data model used in the first 4 VOs:

XML-based SPASE (Space Physics Archive Search and Extract)

IDIS will use an extended version of SPASE for VO-services

Other compatible systems: e.g. SIPAD-NG (oceanography/ [EGU2009-7187](#)),
IS-ENES (InfraStructure for the European Network for Earth System
Modelling)



GODDARD SPACE FLIGHT CENTER
 Space Physics Data Facility

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Virtual Space Physics Observatory

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Text Restriction

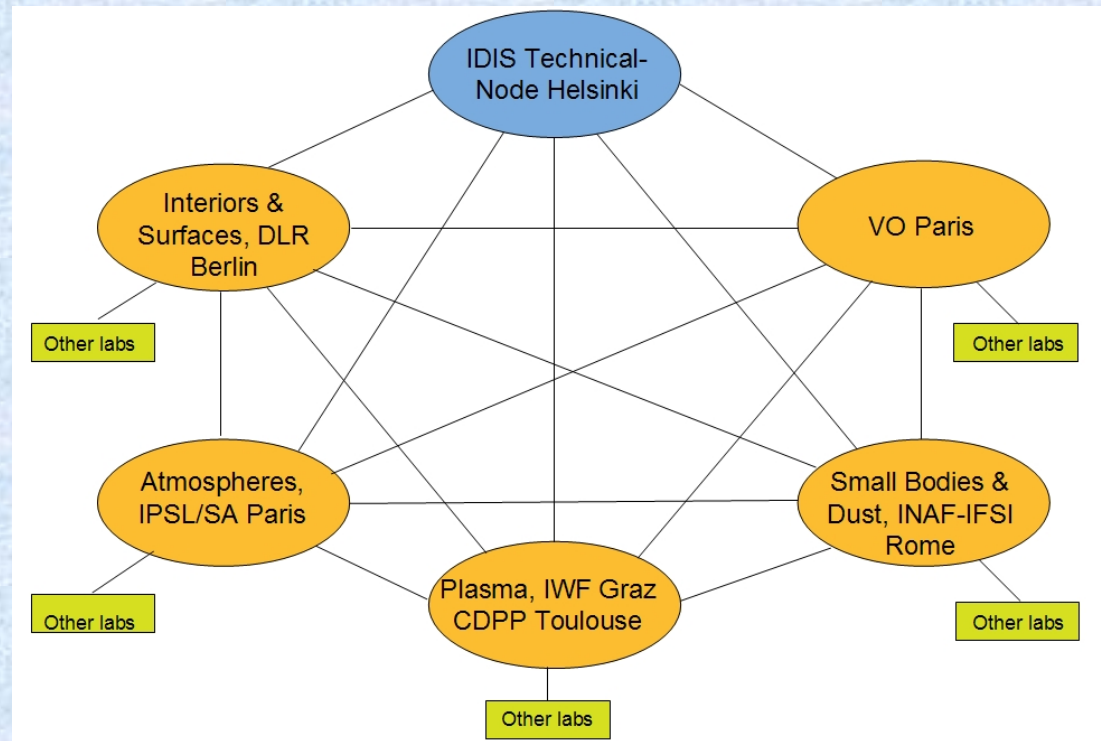
Time Span Restriction ⓘ
 YYYY-MM-dd or YYYY-DDD
 from:
 to:

Element Restriction ⓘ
[Resource type](#) ⓘ
[Measurement type](#) ⓘ
[Observatory Group](#) ⓘ
[Observatory](#) ⓘ
[Instrument](#) ⓘ
[Observed region](#) ⓘ
[Instrument region](#) ⓘ
[Spectral range](#) ⓘ
[Cadence](#) ⓘ
[Repository Name](#) ⓘ
[Access rights](#) ⓘ
[Format](#) ⓘ

Current Product Restrictions
 No restrictions are currently set.

#	Product Name	Access Links
1	ACE 27-day Survey Plots	• Polar-Wind-Geotail 'gif-walk' site
2	ACE CRIS 1-hr Z=3-28 flux data	• ACE Science Center • ACE/SIS L2 data in HDF via ftp
3	ACE Daily Survey Plots	• Polar-Wind-Geotail 'gif-walk' site
4	ACE EPAM 1-hour particle flux data	• ACE Science Center (ASC) • in HDF via ftp from ASC • CDAWeb <input type="button" value="get data"/> • in CDF via ftp from CDAWeb • in ASCII via ftp from NSSDC
5	ACE EPAM 5-min particle flux data	• ACE Science Center (ASC) • in HDF via ftp from ASC
6	ACE GSE 12-min Position Data	• in CDF via ftp from CDAWeb • Satellite Situation Center • CDAWeb <input type="button" value="get data"/>
7	ACE MAG 1-hr Key Parameter (recent) data	• in CDF via ftp from CDAWeb • CDAWeb <input type="button" value="get data"/>
8	ACE MAG 1-hr magnetic field data	• ACE Science Center (ASC) • in HDF via ftp from ASC • CDAWeb <input type="button" value="get data"/> • in CDF via ftp from CDAWeb • in ASCII via ftp from NSSDC
9	ACE MAG 16-s Key Parameter (recent) data	• in CDF via ftp from CDAWeb • CDAWeb <input type="button" value="get data"/>
10	ACE MAG 16-s magnetic field data	• ACE/MAG 16-s data at ASC • ACE/MAG L2 data in HDF via ftp
11	ACE MAG 4-min magnetic field data	• ACE Science Center (ASC) • CDAWeb <input type="button" value="get data"/> • in CDF via ftp from CDAWeb • in ASCII via ftp from NSSDC
12	ACE MAG 5-min Key Parameter (recent) data	• in CDF via ftp from CDAWeb • CDAWeb <input type="button" value="get data"/>
13	ACE MAG SWEPM 1-min field and plasma	• OMNWeb • nssdrftp

- **Technical Node**
Coordination, network, project support aspects like instrument design, ground support etc
- **Interiors & Surface Node**
internal structure, formation and evolution of the planets and their moons
- **Atmospheres Node**
Planetary atmospheres, spectra, chemistry
- **Plasma Node**
Planetary environment and Solar wind
- **Small Bodies and Dust Node**
Comets, asteroids, interplanetary dust
- **Virtual Observatory Paris**
Orbit calculation, spectral data bases, astronomy aspects



Data Model

XML-based, similar to plasma sciences' SPASE model

- + Spase (1)
 - + Version (1)
 - + Catalog (* of A)
 - + Resource ID (1)
 - + Resource Header (1)
 - + Resource Name (1)
 - + Alternate Name (*)
 - + Release Date (1)
 - + Expiration Date (0)
 - + Description (1)
 - + Acknowledgement (0)
 - + Contact (+)
 - + Person ID (1)
 - + Role (+)
 - + Information URL (*)
 - + Name (0)
 - + URL (1)
 - + Description (0)
 - + Association ID (*)
 - + Prior ID (*)

Meta-Data

- + Access Information (+)
 - + Repository ID (1)
 - + Availability (0)
 - + Access Rights (0)
 - + Access URL (+)
 - + Name (0)
 - + URL (1)
 - + Description (0)
 - + Format (1)
 - + Encoding (0)
 - + Data Extent (0)
 - + Bytes (1)
 - + Units (0)
 - + Per (0)
 - + Acknowledgement (0)
 - + Provider Resource Name (0)

Data-Descriptor

.....

Database System: Public Domain **eXist** XML-db

http://www.idis.europlanet-ri.eu/

Direct Node Links

Search-Tool

- IDIS – the data network implementation of Europlanet-RI is an example for interdisciplinary information access
- The planned data model allows access to a large variety of resources and the combination of data sets from different disciplines
- Original data remain at the location of the responsible organization – no mirror servers are implemented
- Keyword-based search supports data mining from less well-known sources
- The de-centralized network structure allows concentration of expertise without limiting the interdisciplinary possibilities.
- **How to contribute resources: See poster XY437 (EGU2009-9435) in the GI4 poster session on Thursday**