

Europlanet-RI/IDIS: Finding information for planetary research

Walter Schmidt, FMI Helsinki

Maria Teresa Capria, INAF, Rome, Italy

G rard Chanteur, LPP/CNRS, France

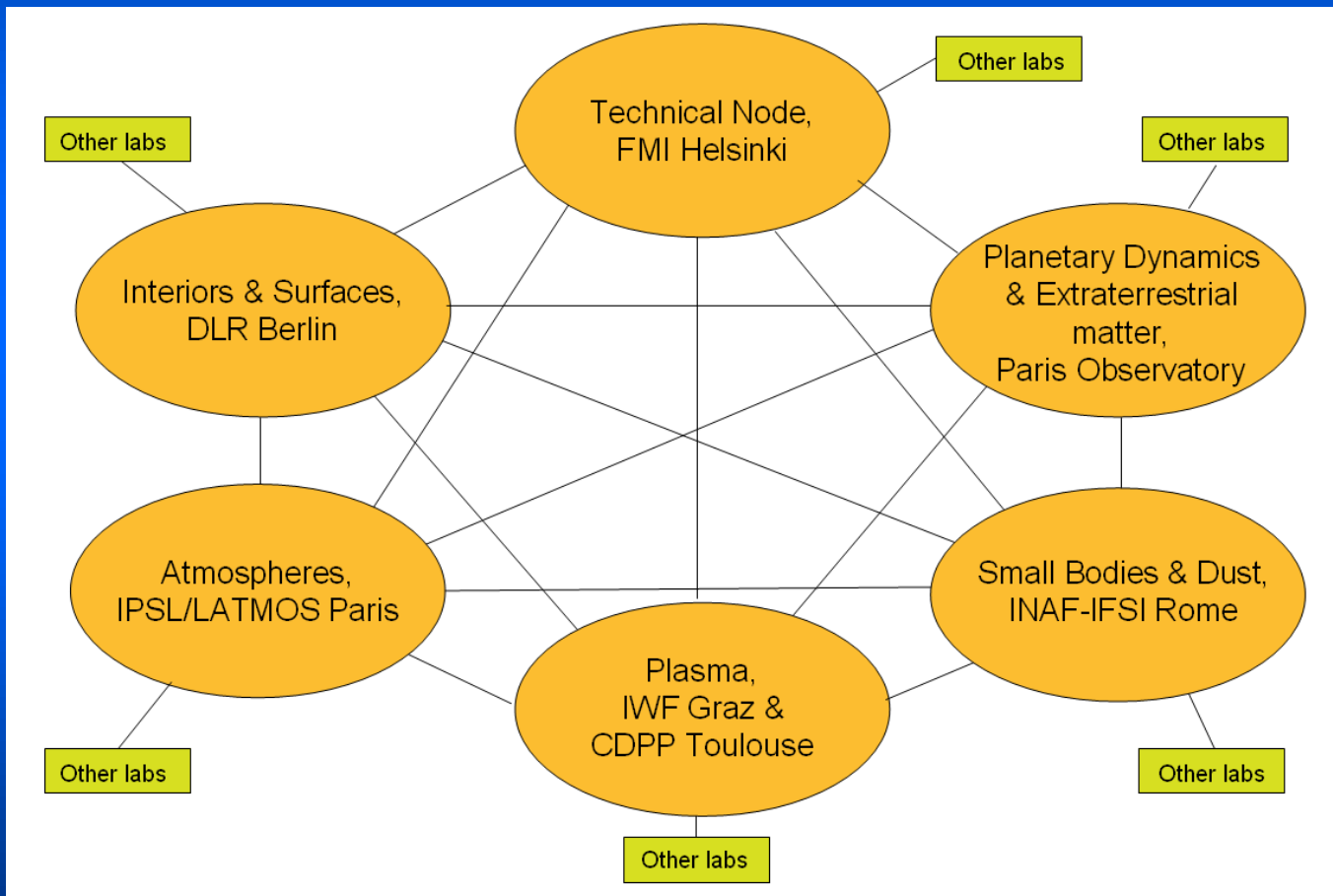
Europlanet-RI Homepage



The screenshot shows the homepage of Europlanet-RI. At the top, there is a navigation bar with the Europlanet logo and the text 'A European Research Infrastructure for Planetary Science'. Below this is a large banner image featuring various celestial bodies like Jupiter, Saturn, and Mars, along with a satellite. The main content area includes a 'Welcome to the Europlanet RI website.' section, followed by a paragraph describing the infrastructure and its objectives. A large red diagonal banner across the middle contains the URL 'http://www.europlanet-ri.eu/'. On the right side, there are several buttons: 'Open Access to Planetary Science Facilities', 'Press Office', and 'NEWS & EVENTS'. The 'NEWS & EVENTS' section lists 'Expert Exchange Call 4' and 'Meeting open to the public'. A footer note states: 'Attention: This website requires to have the "cookies" authorized in your browser'.

<http://www.europlanet-ri.eu/>

Structure of IDIS (Integrated and Distributed Information Service)



What Can IDIS Do For You ?

- Locate experts for consultation or co-operation
- Locate institutes with expertise in certain fields
- Locate facilities or laboratories for analogies to help interpret planetary data
- Locate models or tools for data interpretation
- Locate data related to your field of planetary research
- Locate auxiliary data from related fields
- Access and combine data from a wide range of sources
- Make your own data / models / tools known to others
- Locate information for instrument development and testing

Functions of an IDIS Node

- **Responsible for a Science Theme**
 - Establish and keep contact with scientists
 - Maintain, update and expand links to related resources
 - Support connection of new resources
- **Web Site Functionality**
 - Access to theme-related resources / meta-data
 - Keyword-based search engine
 - Direct links to other Europlanet-RI activities and Nodes
- **Virtual Observatory Functionality**
 - Support of VO-like access to related data where possible

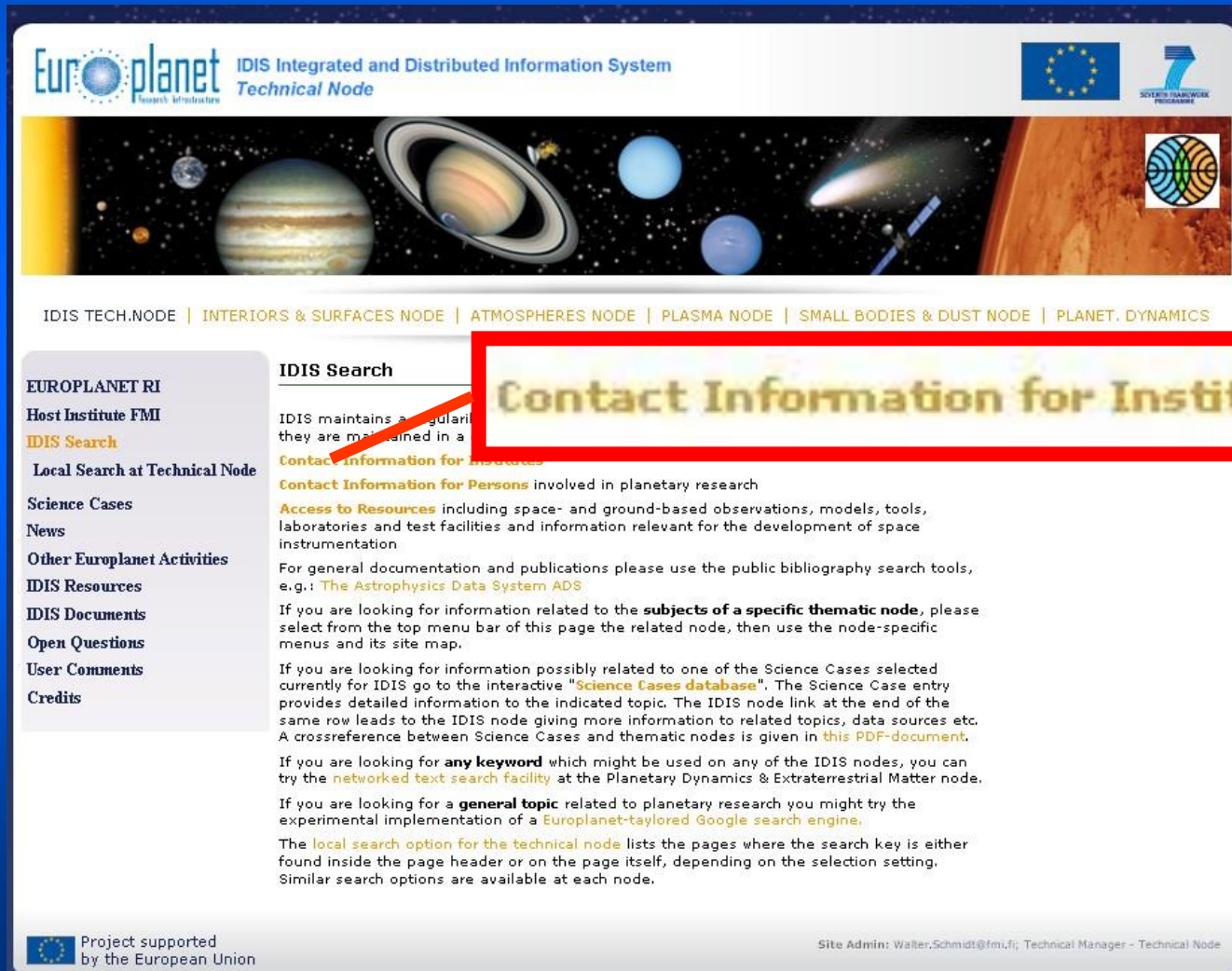
IDIS Technical Node



The screenshot shows the IDIS Technical Node website interface. At the top, there is a navigation bar with the Europlanet logo and the text "IDIS Integrated and Distributed Information System Technical Node". Below this is a banner image of various celestial bodies. A navigation menu is visible, with "IDIS TECH.NODE" highlighted in a red box. On the left side, there is a sidebar menu with a green box around it, containing links such as "EUROPLANET RI", "Host Institute FMI", "IDIS Search", "Science Cases", "News", "Other Europlanet Activities", "IDIS Resources", "IDIS Documents", "Open Questions", "User Comments", and "Credits". The main content area features a "Site map" icon and a "News" section with several entries, including "19.-24.09.2010 EPSI EuroPlanet/IDIS (SM)", "06.02.2010 The resource-related structure of the Technical Node was published after re-designed.", "02.03.2010 The possibility of sending comments to the IDIS management is again activated.", "11.02.2010 Job opportunities are regularly advertised via the Europlanet home page", and "08.02.2010 IDIS Resource Definition document, version 1, published". At the bottom left, there is a "Service Login" section with fields for "Username:" and "Password:" and a "Login" button. A counter displays the number "346784". The footer includes the text "Project supported by the European Union" and "Site Admin: Walter.Schmidt@fmi.fi, Technical Manager - Technical Node".

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

Search Strategies



The screenshot shows the IDIS website interface. At the top, there is a navigation bar with the Europlanet logo, the text 'IDIS Integrated and Distributed Information System Technical Node', and logos for the European Union and the Seventh Framework Programme. Below the navigation bar is a banner image featuring various celestial bodies like Jupiter, Saturn, and Mars, along with a satellite. A menu bar lists several thematic nodes: IDIS TECH.NODE, INTERIORS & SURFACES NODE, ATMOSPHERES NODE, PLASMA NODE, SMALL BODIES & DUST NODE, and PLANET. DYNAMICS.

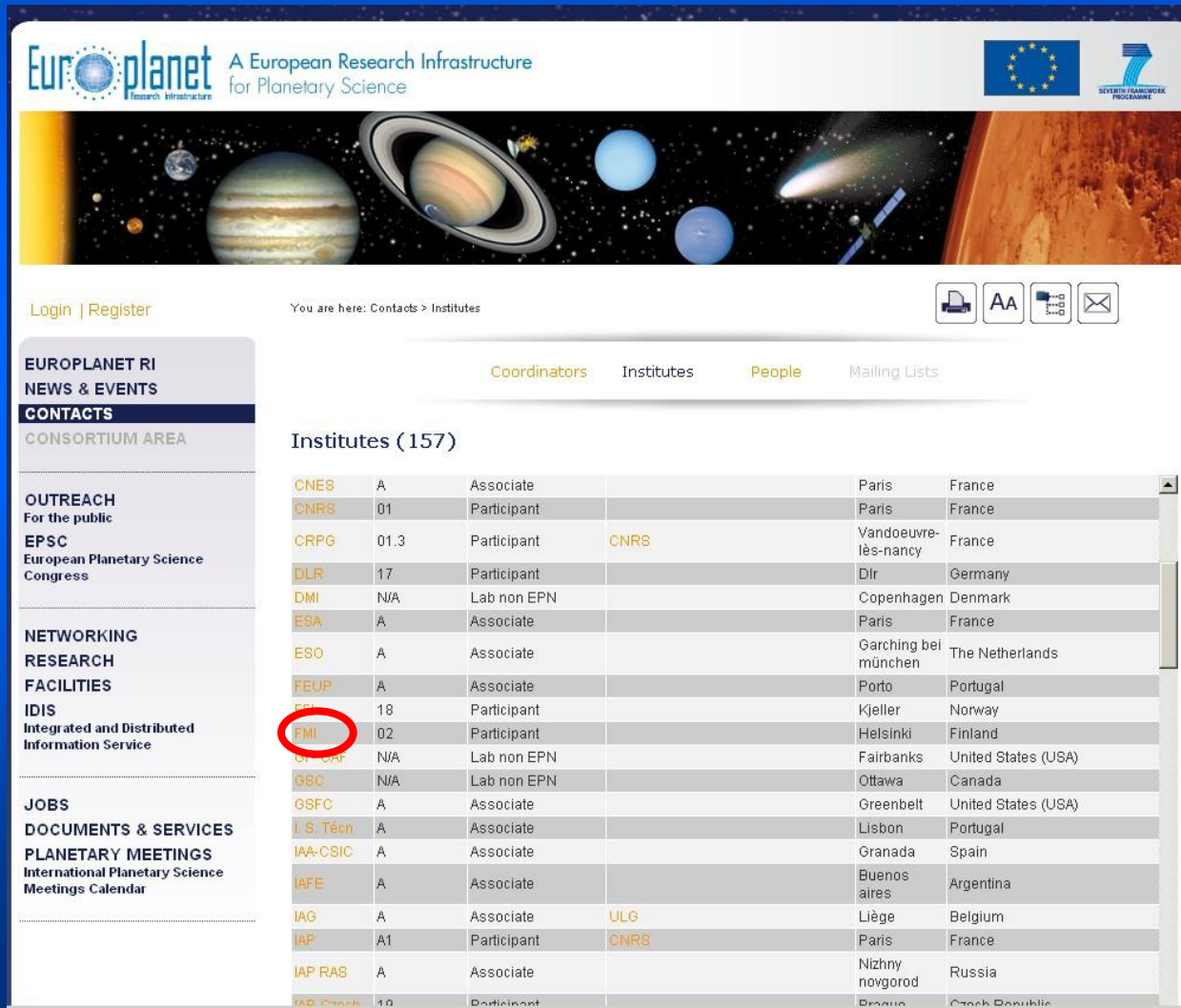
On the left side, there is a sidebar menu with the following items: EUROPLANET RI, Host Institute FMI, IDIS Search, Local Search at Technical Node, Science Cases, News, Other Europlanet Activities, IDIS Resources, IDIS Documents, Open Questions, User Comments, and Credits.

The main content area is titled 'IDIS Search'. It contains several sections:

- Local Search at Technical Node**: A section with a red diagonal line through it, indicating it is not applicable.
- Contact Information for Institutes**: A section highlighted with a red box, containing the text 'Contact Information for Institutes'.
- Contact Information for Persons**: A section providing information on how to find contact details for individuals involved in planetary research.
- Access to Resources**: A section listing various resources such as space- and ground-based observations, models, tools, laboratories, and test facilities.
- General documentation and publications**: A section mentioning the use of public bibliography search tools like The Astrophysics Data System (ADS).
- Information related to specific thematic nodes**: A section explaining how to use the top menu bar and node-specific menus to find information related to a specific thematic node.
- Information possibly related to one of the Science Cases**: A section describing the Science Cases database and how to use it to find detailed information on a specific topic.
- Keyword search**: A section explaining how to use the networked text search facility to find information related to a specific keyword.
- General topic search**: A section explaining how to use the experimental implementation of a Europlanet-tailored Google search engine to find information related to a general topic.
- Local search option for the technical node**: A section explaining how to use the local search option to find pages where the search key is either found inside the page header or on the page itself.

At the bottom of the page, there is a footer with the text 'Project supported by the European Union' and 'Site Admin: Waller.Schmidt@fmi.fi; Technical Manager - Technical Node'.

Search for *Institute information*



The screenshot shows the Europlanet website interface. At the top, there is a navigation bar with the Europlanet logo, the text 'A European Research Infrastructure for Planetary Science', and logos for the European Union and the Seventh Framework Programme. Below the navigation bar is a banner image featuring various celestial bodies like Jupiter, Saturn, and Mars, along with a satellite and a comet. The main content area is titled 'Institutes (157)' and contains a table of participating institutes. The 'FMI' row is circled in red. On the left side, there is a sidebar menu with categories such as 'EUROPLANET RI NEWS & EVENTS', 'CONTACTS', 'CONSORTIUM AREA', 'OUTREACH For the public', 'EPSC European Planetary Science Congress', 'NETWORKING RESEARCH FACILITIES', 'IDIS Integrated and Distributed Information Service', 'JOBS', and 'DOCUMENTS & SERVICES PLANETARY MEETINGS International Planetary Science Meetings Calendar'. At the top right of the main content area, there are utility icons for printing, text size, and a search icon. Below the utility icons, there are navigation tabs for 'Coordinators', 'Institutes', 'People', and 'Mailing Lists'.

You are here: [Contacts](#) > [Institutes](#)

[Print](#) [AA](#) [Search](#) [Mail](#)

[Coordinators](#) [Institutes](#) [People](#) [Mailing Lists](#)

Institutes (157)

CNES	A	Associate		Paris	France
CNRS	01	Participant		Paris	France
CRPG	01.3	Participant	CNRS	Vandoeuvre-lès-nancy	France
DLR	17	Participant		Dir	Germany
DMI	N/A	Lab non EPN		Copenhagen	Denmark
EBA	A	Associate		Paris	France
EBO	A	Associate		Garching bei münchen	The Netherlands
FEUP	A	Associate		Porto	Portugal
FFI	18	Participant		Kjeller	Norway
FMI	02	Participant		Helsinki	Finland
GSFC	N/A	Lab non EPN		Fairbanks	United States (USA)
GSC	N/A	Lab non EPN		Ottawa	Canada
GSFC	A	Associate		Greenbelt	United States (USA)
I. S. Techn	A	Associate		Lisbon	Portugal
IAA-CSIC	A	Associate		Granada	Spain
IAFE	A	Associate		Buenos aires	Argentina
IAG	A	Associate	ULG	Liège	Belgium
IAP	A1	Participant	CNRS	Paris	France
IAP RAS	A	Associate		Nizhny novgorod	Russia
IAP Czech	19	Participant		Brno	Czech Republic

Search for *Institute information*



Europlanet A European Research Infrastructure for Planetary Science

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[Print](#) [AA](#) [RSS](#) [Email](#)

[Coordinators](#) [Institutes](#) [People](#) [Mailing Lists](#)

Institute Detailed View

Acronym: FMI
Full name: Finnish Meteorological Institute
EPN participant#: 02
Status: Participant
City: Helsinki
Country: Finland
Address: Erik Palménin aukio 1
Postcode: 00560
Fields of excellence: Spacecraft instrumentation, data analysis, modelling
Home Page: <http://www.fmi.fi/en/index.html>

People (6):

- Harri Ari-Matti
- Haukka Harri
- Kallio Esa
- Schmidt Walter
- Silen Johan
- Stenius Marja

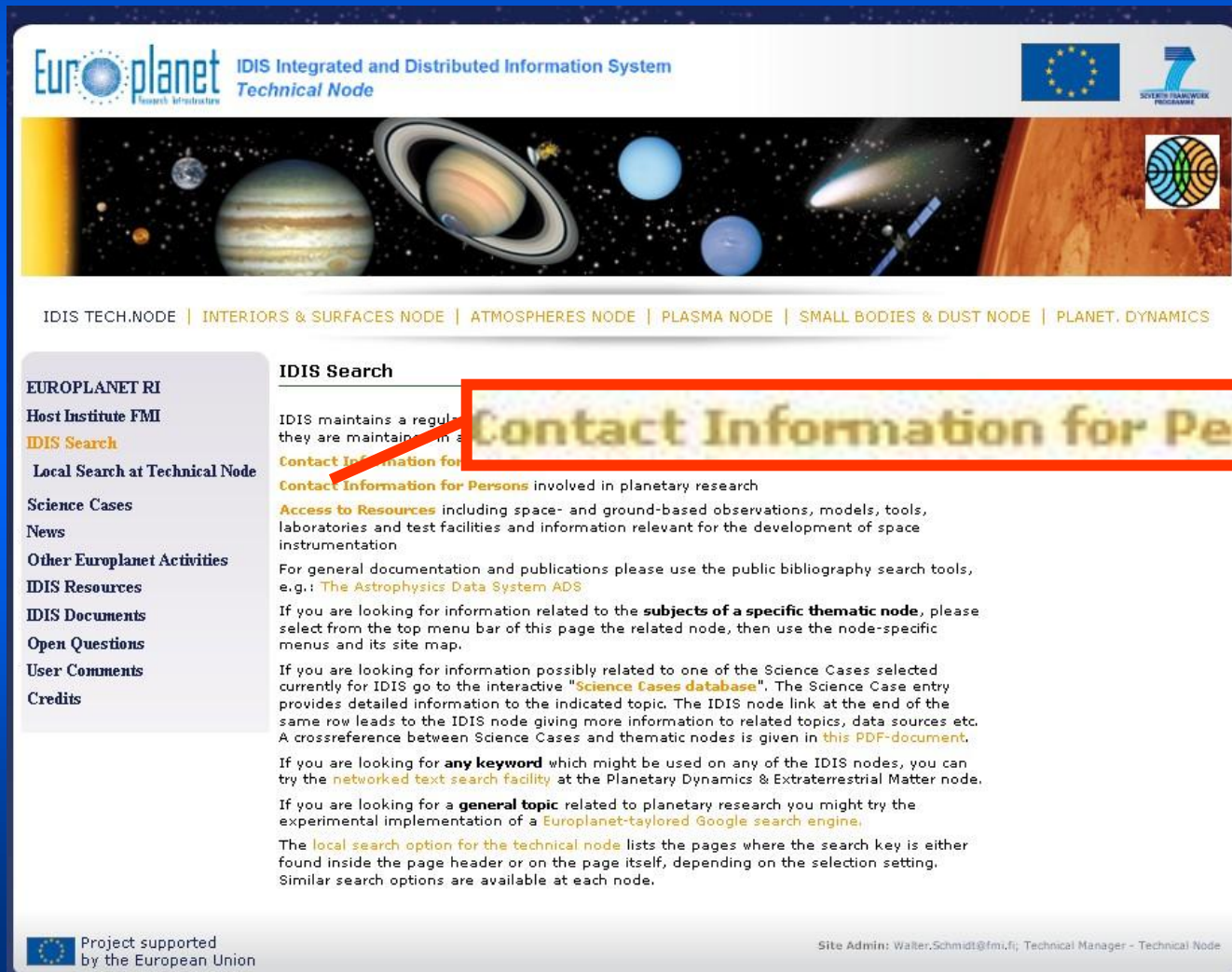
[EUROPLANET RI NEWS & EVENTS](#)
CONTACTS
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EPSC
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NETWORKING RESEARCH FACILITIES
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Search Strategies: *Persons*



Europlanet IDIS Integrated and Distributed Information System
 Technical Node

[IDIS TECH.NODE](#) | [INTERIORS & SURFACES NODE](#) | [ATMOSPHERES NODE](#) | [PLASMA NODE](#) | [SMALL BODIES & DUST NODE](#) | [PLANET. DYNAMICS](#)

EUROPLANET RI
 Host Institute FMI
[IDIS Search](#)
 Local Search at Technical Node
 Science Cases
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IDIS Search

IDIS maintains a regular update of information on persons who are maintaining an active role in planetary research. **Contact Information for Persons** is available for persons involved in planetary research.

Access to Resources including space- and ground-based observations, models, tools, laboratories and test facilities and information relevant for the development of space instrumentation.

For general documentation and publications please use the public bibliography search tools, e.g.: [The Astrophysics Data System ADS](#).


If you are looking for information related to the **subjects of a specific thematic node**, please select from the top menu bar of this page the related node, then use the node-specific menus and its site map.

If you are looking for information possibly related to one of the Science Cases selected currently for IDIS go to the interactive "[Science Cases database](#)". The Science Case entry provides detailed information to the indicated topic. The IDIS node link at the end of the same row leads to the IDIS node giving more information to related topics, data sources etc. A crossreference between Science Cases and thematic nodes is given in [this PDF-document](#).


If you are looking for **any keyword** which might be used on any of the IDIS nodes, you can try the [networked text search facility](#) at the Planetary Dynamics & Extraterrestrial Matter node.

If you are looking for a **general topic** related to planetary research you might try the experimental implementation of a [Europlanet-tailored Google search engine](#).



The [local search option for the technical node](#) lists the pages where the search key is either found inside the page header or on the page itself, depending on the selection setting. Similar search options are available at each node.


 Project supported by the European Union
 Site Admin: Waller.Schmidt@fmi.fi; Technical Manager - Technical Node

Search for *Persons'* information







A European Research Infrastructure for Planetary Science



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[Coordinators](#)
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People (389)

LIST ORDERED BY COUNTRY

Email	Name	First name	Institute	Speciality
	Achilleos	Nicholas	UCL	Magnetospheres and Ionospheres of giant planets
	Adam	Christiane	OBSPARIS	Administrative Contact Point
	Adriano	Campo Bagatin	UA	
	Agarwal	Jessica	ESA	
	Aittola	Marko	Univ Oulu	Planetary Geology
	Alcaraz	Christian	LCP	Ionosphere Chemistry
	Alessandro Retinò	Alessandro	MFV-OEAW	Space plasmas
	Allemand	Pascal	LST	Planetary surfaces
	Altwegg	Kathrin	Univ Bern	Comets
	Ambrosius	Boudewijn	TU Delft	
	Andre	Nicolas	CESR	Space plasma physics, giant planet

EUROPLANET RI NEWS & EVENTS

CONTACTS

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For the public

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European Planetary Science Congress

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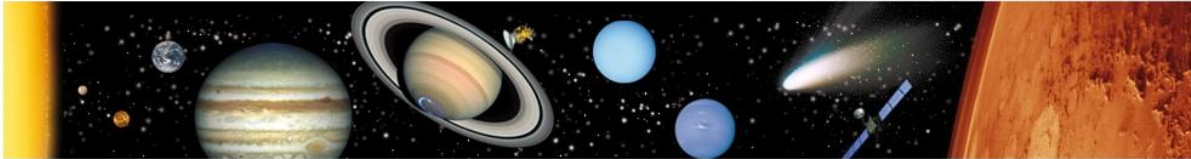
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JOBS

DOCUMENTS & SERVICES





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International Planetary Science Meetings Calendar

Search for *Persons'* information



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[Institutes](#)
[People](#)
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Person Detailed View

Name: Schmidt
First name: Walter
Institute: [FMI](#)
Department (or team, or group): Earth Observation Division
Speciality: Planetary atmospheres, comets
Position: Research manager
Email: [Walter.Schmidt\(_at_\)fmi.fi](mailto:Walter.Schmidt(_at_)fmi.fi)
Institute Representative: NO

EPN-RI Scientific domain(s) (2):
[Small bodies and origins](#)
[Terrestrial planets](#)

EPN-RI Scientific expertise(s) (3):
[Database](#)
[Modelling, simulation, and theory](#)
[Space based instruments & observations](#)

Activite(s) (4):
[NA2 - Science Networking \(Task Leader\)](#)
[JRA3 - European Modelling and Data Analysis Facilities \(Expert\)](#)
[JRA-IDIS - Integrated and Distributed Information Service \(IDIS\) \(Technical Manager\)](#)
[SA-IDIS - Integrated and Distributed Information Service \(IDIS\) \(Technical Manager\)](#)

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Search for *Resources*



A European Research Infrastructure
for Planetary Science






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You are here: [Idis](#) > [Res](#)







[Presentation](#) | [Resources](#) | [Science Cases](#) | [IDIS Nodes](#)

Resources (263)



Google Search (from European Planetology websites)



ALL resources - EPN resources only - non EPN resources only

Display details - No details

Display dates - No dates

FILTER by scientific thematic :

FILTER by Science Case :

Short Name	Brief description	Responsible Node	Type	EPN location (lab/inst)
		ALL	ALL	ALL

EUROPLANET RI NEWS & EVENTS CONTACTS

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Search for *Resources* / filtered

JOB

DOCUMENTS & SERVICES

PLANETARY MEETINGS
International Planetary Science Meetings Calendar

Display dates
No dates

FILTER by scientific thematic :

FILTER by Science Case :

ALL

SC0.1 - Definition and archiving of ground-based observations in support of space missions

SC1.1 - Dating planetary surfaces

SC1.2 - Quantifying the Martian geochemical reservoirs

SC1.3 - Exchange processes between surface and interior of icy moons

SC1.4 - Surface material composition

SC1.5 - Tectonics on Mars

SC1.6 - Terrestrial Analogues

SC1.7 - Enceladus

SC2.1 - Titan Ion Chemistry

SC2.2 - IR and RAMAN Spectroscopy of Methane

SC2.3 - Mars atmosphere measured by Spicam and GCM visualisation tool

SC2.4 - Understanding super-rotation

SC3.1 - Solar wind interaction with Jupiter and Saturn aurorae

SC3.2 - What is the origin of the planetary modulated (quasi-periodic) signatures at Saturn ?

SC3.3 - Interaction of magnetospheric plasma with icy moons in the Saturnian system (and others)

SC3.4 - Planets under extreme stellar conditions

SC4.1 - Relative contributions of asteroidal dust, cometary dust.. to the structure of zodiacal cloud

SC4.2 - What is the dynamical and morphological structure of the Kuiper belt

Analysis Software	Cluster CIS, MEX Aspera, VEX Aspera instruments	Technical	(DEPRECATED) Software tool/Script	MPS
Analytical facilities	Analytical facilities : ion probes, mass spectrometers, experimental petrology	Technical	(DEPRECATED) Lab. Facility	CRPG
AstDyS	Asteroids Dynamic Site	Technical	(DEPRECATED) Web Tool (interactive webpage with GUI)	
ASTER Spectral Library	ASTER Spectral Library	Small Bodies, Dust, and TNOs	(DEPRECATED) Web Tool (interactive webpage with GUI)	
Asteroids with Satellites	Information on binary asteroids	Technical	(DEPRECATED) Web Tool (interactive webpage with GUI)	
Asteroids with Satellites	This Network provides Virtual Lectures on		(DEPRECATED)	

EPN location (lab/inst)

ALL

AARI

IPSL

MPS





CRPG

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Sitemap | Credits

Search for *Resources* / *Details*

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You are here: [Idis](#) > [Res](#)

[Presentation](#)
[Resources](#)
[Science Cases](#)
[IDIS Nodes](#)

Resource Detailed View

Short Name: Galileo mission at JPL
Brief description: Galileo mission to Jupiter, mission description homepage hosted by the Jet Propulsion Laboratory
URL: <http://galileo.jpl.nasa.gov/>
Type: (DEPRECATED) Web Page/describing a Mission project
English Language: YES
Restricted access: NO
EPN location (lab or institute): JPL
Contributor: [Topf](#)
Last updater: [Topf](#)
Contact: [Topf](#)
This is a copy (not an original): NO

Related domain(s) (2):

[Space based instruments & observations](#)

Keywords (4):

[Europa](#)
[Galileo](#)
[Jupiter](#)
[Jupiter Satellites](#)

Science Cases (1):

[SC3.1 - Solar wind interaction with Jupiter and Saturn aurorae](#)

Node(s) association (1):

[Plasmas](#)

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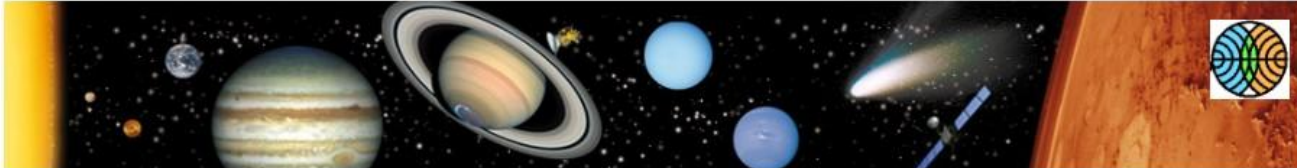
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Search Strategies



IDIS Integrated and Distributed Information System
Technical Node



IDIS TECH.NODE | INTERIORS & SURFACES NODE | ATMOSPHERES NODE | PLASMA NODE | SMALL BODIES & DUST NODE | PLANET. DYNAMICS

EUROPLANET RI

Host Institute FMI

IDIS Search

Local Search at Technical Node

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IDIS Search

IDIS maintains a regularly updated list of resources relevant for planetary research. Currently they are maintained in a centralized database accessible via the Europlanet-RI home page:

Contact Information for Institutes

Contact Information for Persons involved in planetary research

Access to Resources including space- and ground-based observations, models, tools, laboratories and test facilities and information relevant for the development of space instrumentation

For general documentation and publications please use the public bibliography search tools, e.g.: [The Astrophysics Data System ADS](#)


If you are looking for information related to the **subjects of a specific thematic node**, please select from the top menu bar of this page the related node, then use the node-specific menus and its site map.

If you are looking for **any keyword** currently for IDIS go to the **networked text search facility** provided in the same row leads to the **networked text search facility**. A crossreference to the **networked text search facility**.

If you are looking for **any keyword** currently for IDIS go to the **networked text search facility** provided in the same row leads to the **networked text search facility**. A crossreference to the **networked text search facility**.

If you are looking for a **general topic** related to planetary research you might try the experimental implementation of a **Europlanet-tailored Google search engine**.

The **local search option for the technical node** lists the pages where the search key is either found inside the page header or on the page itself, depending on the selection setting. Similar search options are available at each node.



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Site Admin: Waller.Schmidt@fmi.fi; Technical Manager - Technical Node

Search for *Keywords*

EUROPLANET RI

Host Institute: Obs. de Paris

Search

DATA RESOURCES

- . Meteorites & lunar samples
- . Ices & minerals spectra
- . Ephemeris

SERVICES

- . SKYBOT
- . SSODNET
- . Other services

TOOLS

You are here: Planetary Dynamics Node > Search Engine

[IDIS Tech. Node](#) [Interiors & Surfaces Node](#) [Atmospheres Node](#) [Plasma Node](#) [Small Bodies & Dust Node](#) [Planet. Dynamics Node](#)

This search will allow you to search the contents available in the different IDIS node sites

Match: Format: Sort by:

Search:

A Europlanet-IDIS search engine is being defined for the project

Search for *Keywords*



Search results for 'europa'

Match: Format: Sort by:

Refine search:

Documents 1 - 2 of 2 matches. More ☆'s indicate a better match.

[EuroPlaNet IDIS - Integrated and Distributed Information Service: Web-based data catalogues](#)☆☆☆☆

... http://www.srl.utu.fi/erne_data/carrot/ ERNE, Helium Intensities for Carrington Rotation plots (since 1906) * <http://www.math.washington.edu/~greenber/Europa.html> Information- and linklist-homepage dedicated to Jupiter's moon **Europa**. * <http://exoplanet.eu/> Extrasolar Planets Encyclopaedia. European interactive ...
<http://europlanet-plasmanode.oeaw.ac.at/index.php?id=93> 01/04/10, 11750 bytes

[EuroPlaNet IDIS - Integrated and Distributed Information Service: Satellite influences on aurorae](#)☆

... the energetic particles deposit their energy. This shows up as bright spots of aurora at the location of the foot points of the moon flux tubes. **Europa** and Ganymede show up as bright points in the diffuse aurora region, whereas Io shows up as a bright spot with tail below the main auroral oval. The ...
<http://europlanet-plasmanode.oeaw.ac.at/index.php?id=266> 01/04/10, 14979 bytes



[ht://Dig 3.2.0b6](#)

Google-Search for Planetary Science Keywords

The screenshot shows the Europlanet website interface. At the top, there is a navigation bar with the Europlanet logo, the text 'A European Research Infrastructure for Planetary Science', the European Union flag, and the Seventh Framework Programme logo. Below this is a large banner image featuring various celestial bodies: Earth, Jupiter, Saturn, Uranus, Neptune, a comet, and a satellite. The main content area includes a search bar with the text 'Europa' entered, and a search button labeled 'EuroPlaNet Search'. The search results show '(52) Europa' as the top result, with a snippet of text: '... (52) Europa. Orbital Elements. The following orbital elements are taken from MPC 24371: (52) Europa Epoch 2007 Oct. 27.0 ...'. The website also features a sidebar with navigation links such as 'EUROPLANET RI NEWS & EVENTS', 'CONTACTS', 'CONSORTIUM AREA', 'OUTREACH For the public', 'EPSC European Planetary Science Congress', and 'NETWORKING RESEARCH FACILITIES IDIS Integrated and Distributed'.

Search for *Instrument Support*



[IDIS TECH.NODE](#) | [INTERIORS & SURFACES NODE](#) | [ATMOSPHERES NODE](#) | [PLASMA NODE](#) | [SMALL BODIES & DUST NODE](#) | [PLANETS](#)


EUROPLANET RI
at Institute FMI
Search
Search at Technical Node
ence Cases
s
er Europlanet Activities

Search from the IDIS Technical Node Webpages



Searchword:



Search in: ▼

Search for *Instrument Support*



IDIS Integrated and Distributed Information System
Technical Node

[IDIS TECH.NODE](#) |
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 [PLASMA NODE](#) |
 [SMALL BODIES & DUST NODE](#) |
 [PLANET. DYNAMICS](#)

EUROPLANET RI

Host Institute FMI

IDIS Search

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Search from the IDIS Technical Node Webpages

Searchresult: 1-2 of 2

Instrument Development Support


Collection of information useful for the development of instruments for planetary research
 ESCIES - European Space Components Information Exchange System (ESCC-documents)For
 standards select -&...

Space instrument development support information

On these Web-pages information is collected which is useful for design and verification of
 space instrumentation. This includes information for the selection of materials and
 components, quality assur...

Searchword:

Search in:

 Project supported by the European Union

Site Admin: Walter.Schmidt@fmi.fi; Technical Manager - Technical Node

Science Cases Database



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You are here: [Idis](#) > [Sc](#)



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Science Cases

To see the resources associated with a science case, just click on a science case name or number (#)

#	Name	Description	Node in charge
SC0.1	Definition and archiving of ground-based observations in support of space missions	Definition and archiving of ground-based observations in support of space missions	Technical
SC1.1	Dating planetary surfaces	Dating planetary surfaces from cratering processes : formation of the solar system	Interiors & Surfaces
SC1.2	Quantifying the Martian geochemical reservoirs	Quantifying the Martian geochemical reservoirs	Interiors & Surfaces
SC1.3	Exchange processes between surface and interior of	Exchange processes between surface and interior of	Interiors & Surfaces

Science Cases Crossreference

March 27, 2008
Author: W. Schmidt, FMI

Current Science Case numbering as published in the User Requirements Document

Correlation matrix between FP6 numbering and IDIS Implementation

FP6-SC	Title / Description	NA2-WG
SC1	Venus super-rotation	3
SC2	Titan Ion Chemistry	1+3
SC3	Solar wind interaction with Jupiter and Saturn aurorae	1+4
SC4	Internally driven electrodynamic phenomena in giant planets' magneto-plasmas	1
SC5	Investigation of the interaction of magnetospheric plasma with icy moons in the Saturnian system and other giant planet systems	1+4
SC6	Definition and archiving of ground-based observations in support of space missions	1-5
SC7	Methane spectroscopy	3
SC8	Dating planetary surfaces from cratering processes: formation of the solar system	3
SC9	Quantifying the Martian geochemical reservoirs	3
SC10	Exchange processes between surface and interior of icy moons	2+3
SC11	Relative contribution to zodiacal cloud	2
SC12	What is the dynamical and morphological structure of the Kuiper belt	2
SC13	Gas and Dust emission of comet C-G during Rosetta mission	2
SC14	Solar wind-comet surface interaction	2+4
SC15	Surface material composition	3
SC16	Distant activity, outbursts, splitting and disruption of cometary nuclei	2
SC17	Planets under extreme stellar conditions	5
SC18	Tectonics on Mars	3
SC19	Terrestrial analogues in studies of the Martian surface	3
SC20	Enceladus	1+3
SC21	Mars global climate	3
-	Titan and its Tholins (aerosols)	1+3
-	Gas giant planetary atmospheres and exospheres	1,3,5
-	Gas giant planetary ionospheres, magnetospheres	1,4,5
-	Surfaces of small comets and asteroids	2
-	Dust in the solar system	2
-	Interaction between solar wind and magnetospheres/exospheres (space weather)	4
-	Dynamo properties of planetary interior	4
-	Exoplanets and other planetary systems	5

Responsible Node:	Interiors	Atmospheres	Plasma	Small Bodies	Planet.Dyn.	Techn.node
		SC2.4				
		SC2.1				
		*	SC3.1			
			SC3.2			
	*		SC3.3			
	*	*	*	*	*	SC0.1
		SC2.2				*
SC1.1						
SC1.2		*				
SC1.3						
				SC4.1		
				SC4.4	*	
		*	*	SC4.2		
	*		*	SC4.5		
SC1.4				*		
				SC4.3	*	
		*	SC3.4		*	
SC1.5						
SC1.6						
SC1.7						
		SC2.3				
		SC2.5				
		*	*			
			*			
*				*		
			*	*	*	
*			*			
	*	*	*		*	

NA2-WG	Description	Responsible
1	Giant planet systems as templates of planetary systems	NORBERT KRUPP
2	Small bodies and origin of the solar system	WALTER SCHMIDT
3	Terrestrial planets and comparative planetology	KAROLY SZEGO
4	Magnetic worlds, the Sun-planet connection	ESA KALLIO
5	Exoplanets and other planetary systems	HELMUT LAMMER

 implemented

Science Case 0.1 (at TN)



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 [ATMOSPHERES NODE](#) |
 [PLASMA NODE](#) |
 [SMALL BODIES & DUST NODE](#) |
 [PLANET. DYNAMICS](#)

EUROPLANET RI

[Host Institute FMI](#)

[IDIS Search](#)

[Science Cases](#)

[Science Cases: Background](#)

[- Science Case 0.1](#)

[Space instrument development support information](#)

[Space mission support information](#)

[Technical information for data providers](#)

[Science Links](#)

[News](#)

[Other Europlanet Activities](#)

EuroPlaNet Science Cases

IDIS "Science Cases" are a means to organize the contents and services offered to the public. Information and tools needed to work on related topics are collected and explained together with information about how to access related data. According to their main field of research the related information is organized and managed under the responsibility of one of the IDIS nodes.

Additional Science Cases may be proposed any time either to the scientific staff of one of the nodes or to the [Europlanet-RI Network Activity 2](#) and its working groups. A complete list with their node association can be found in the [resource data base](#).

Background of the IDIS Science Case development

Science Cases implemented at the Technical Node:

- [Science Case 0.1: Definition and archiving of ground-based observations in support of space missions](#)
- [Space instrument development support information](#)
- [Space mission support information](#)
- [Technical information for data providers](#)

[Information about data centers not \(yet\) allocated to a thematic node or of general interest](#)

TN: Instrument Development



IDIS Integrated and Distributed Information System
Technical Node



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IDIS Search

Science Cases

Science Cases: Background

- Science Case 0.1

Space instrument development support information

Instrument Development Support

Instrument Test Facilities

Simulation Facilities for

Space Instrument Development

On these Web-pages information is collected which is useful for design and verification of space instrumentation. This includes information for the selection of materials and components, quality assurance aspects, test facilities in Europe for the various mandatory instrument verification tests and also facilities to simulate different aspects of planetary and space environments for the planning and verification of instruments for on-surface operation or space-borne measurements.

Information about more test facilities for EMC tests, thermal vacuum tests, vibration- and shock tests, magnetic cleanliness tests and radiation effects are welcome. If such information can be made public please send it to the **TN-manager**.

Collection of information useful for the development of instruments for planetary research

Test facilities for space instrument verification

Simulation and test environment for planetary data verification

TN : Mission Support



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IDIS Search

Science Cases

Science Cases: Background

- Science Case 0.1

Space instrument development
support information

Space mission support
information

Technical information for data
providers

Science Links

Space Mission Support Information

Mission Design Tools

- ESA's Space Environment Information System (SPENVIS)
- Spacecraft Plasma Interactions Network in Europe (SPINE)
- Spacecraft Plasma Interaction System (SPIS)

Mission Support Tools

- ESA-mission SPICE kernel data (ESA/PSA)
- SPICE kernels, documentation, tools and data (NASA/NAIF)
- Model: Algorithms for Huygens entry and descent trajectory reconstruction via Università degli Studi di Padova - Centro Interdipartiment / Francesca Ferri (francesca.ferri (at) unipd.it)

TN : Support Observations



IDIS Integrated and Distributed Information System
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IDIS Search

Science Cases

Science Cases: Background

- Science Case 0.1

Observations Links

Space instrument development
support information

Space mission support
information

Observations of targets for proposed or active space missions

Amateur planetary images from amateur groups:

Exoplanet Information:

Space Weather Information:

Earth Ionosphere Data:

TN / NA1 : Support Observations



Networking Activity 1
Observational Infrastructure Networking



NA1 | OBJECTIVES | WORKSHOPS | TWIKI | NA1 DISCUSSION PANEL | MATRIX OF GROUND-BASED OBSERVATORIES

EUROPLANET RI
NEWS & EVENTS
SEARCH

TASK 1 - Coordination
TASK 2 - Space mission monitoring
TASK 3 - Ground-based facilities monitoring
TASK 4 - Provision of communication Forum

TEAM & ASSOCIATES
GUIDELINES &
REIMBURSEMENT
SITEMAP

Introduction to the Observational Infrastructure Networking

NA1 Observational Infrastructure Networking builds on the highly successful activity *Coordination of Ground-based and Space Observations* that was carried out by Europlanet under FP6. Europlanet RI continues this activity so that the return on investments in space missions is maximized. The activity will be significantly enhanced by two advanced warning activities: Tasks 2 and 3, which are designed to highlight opportunities available to European planetary scientists not being aware of.

NA1 feeds off and into a number of the key workpackages of Europlanet RI. *Science networking* NA2 provides many of the motivations for missions and observations, and they then feed into the science itself. Major results from NA1 will be brought to NA3 *Public Outreach* and to NA4 *Dissemination*. Datasets produced by observations will be fed into Europlanet RI's SA activity, *IDIS*, which also provides previous datasets for comparison with new observations, and there are particular links to the infrastructure development JRAs, for which new data are important inputs and stimulants for new activity.

NA1 operates by four subdivisions (working tasks):

1. Overall coordination of the activity including the responsibility for workshop organization (**TASK 1**)
2. Space mission monitoring (**TASK 2**)

News & Events

NA1 Workshop from 15-17 September: 7th International Workshop on Planetary, Solar and Heliospheric Radio Emissions (PRE VII) ([Details](#))

Agenda & Presentations of WS#05 "1st Europlanet strategic meeting on coordinated ground-based measurements and modeling of the Venus atmosphere" finally online ([Details](#))

NA1 Workshop from 21-22 October 2010: WS#06 6th European Strategic Meteor Workshop - Flashes, Craters and Moonquakes: Exploring the

TN : Simulation Facilities



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Simulation Facilities for Planetary Conditions

Simulation and Test Facilities for planetary Conditions

- TNA1: Field analogue for desert environment
- TNA1: Planetary field analogue for active volcanoes
- TNA1: Field analogue for ground ice and permafrost mapping
- TNA1: Acidic ecosystem, test site for extreme environmental conditions
- TNA1: Field analogue for extremely harsh temperature, dust and chemical environment
- TNA2: Mars Wind Tunnel Simulation Facility
- Mars Wind Tunnel at Oxford University
- Mars Simulation Laboratory Wind Tunnel at Aarhus University, Denmark
- TNA2: Planetary Atmosphere Simulation chamber
- TNA2: Martian Atmosphere Simulation Facility
- TNA2: Simulation chamber for planetary high density atmospheres and surfaces
- TNA2: Simulation chamber for planetary low density atmospheres and surfaces
- TNA2: Titan atmosphere simulation facility for physical and chemical conditions
- TNA2: Planetary Analogue Terrain Laboratory Aberystwyth

EUROPLANET RI

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Space instrument development support information

Instrument Development Support

Instrument Test Facilities

Simulation Facilities for

Node: Surfaces & Interiors / Berlin

IDIS Integrated and Distributed Information System
Interiors and Surfaces

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PLASMA NODE
SMALL BODIES & DUST NODE
PLANET, DYNAMICS NODE

DLR
Institute PF

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Interiors and Surfaces Node

This website is dedicated to the thematic field of *Interiors and Surfaces* as part of the Integrated and Distributed Information Service (IDIS) developed during the EUROPlaNet Project. In General the IDIS System is divided into five thematic nodes and one technical top node. All nodes can be reached via the top menu.

The EuroPlaNet IDIS thematic science node "Planetary Interiors and Surfaces" is hosted by the [Institute of Planetary Research of the Deutsche Zentrum für Luft- und Raumfahrt](#) in Berlin-Adlershof, Germany and is established in close cooperation with the [Laboratoire de Planétologie et Géodynamique de Nantes](#).

The four EuroPlaNet IDIS thematic science nodes (Planetary Surfaces and Interiors, Atmospheres, Plasma Science and Small Bodies) are dedicated to open a web window to the status of solar system research and provide an effective information management system for scientists and interested persons about solar system knowledge, databases and scientific tools.

The main aim of the Planetary Interior and Surface node will be to:

- support collaborative work in the field of planetary interiors and surfaces
- provide information about data bases and scientific tools in this field
- establish an scientific information management
- define and develop Science Cases regarding IDIS

Actually the specific **science cases** related to planetary interiors and surfaces are under construction:

Tectonics on Mars

Terraform Analogues

Erosion

Mars HRSC Data Browser

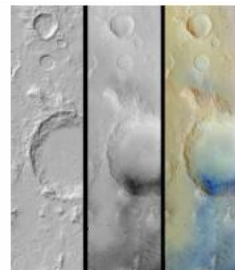
HRSC Data Browser

Go to page [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [11](#) [12](#) [13](#) [14](#) [15](#) [16](#) [17](#) [18](#)

[Full list of all orbits](#)

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[Next page](#)



h0010_0009



h0016_0008



h0018_0000



h0022_0000



h0024_0000



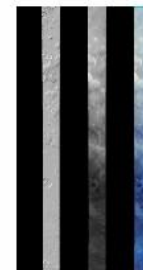
h0032_0000



h0037_0000



h0038_0000



h0047_0000

Planet Summary

IDIS Integrated and Distributed Information System
Interiors and Surfaces

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DLR

Institute PF

Home

Planets

Mercury

Venus

Earth & Moon

Mars & Moons

Asteroids

Jupiter & Moons

Saturn & Moons

Missions & Experiments

You are here: Planets

Our Solar System - A short introduction to the bodies of our solar system and their exploration

This small brochure will provide you a short overview to the bodies of the solar system and their exploration with spacecrafts. Each chapter is completed with physical data of the body and color images. The brochure comes with an appendix of all space missions from the beginning till now.

[→ Download brochure](#)

Last update: 04/05/2010 11:47

Project supported by the European Union

Site Admin: Leo Steinhardt (leo.steinhardt@dlr.de) / Webmaster: Interiors and Surfaces Node

Planet Summary: Mercury

IDIS TECH.NODE | INTERIORS & SURFACES NODE | ATMOSPHERES NODE | PLASMA NODE | SMALL BODIES & DUST NODE | PLANET, DYNAMICS NODE

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- Institute PF
- Home
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- Venus
- Earth & Moon
- Mars & Moons
- Asteroids
- Jupiter & Moons
- Saturn & Moons
- Missions & Experiments

You are here: Planets » Mercury

Mercury

Mercury is the innermost planet in our Solar System. Because it is so close to the Sun, it can be observed from Earth for only about two hours before sunrise and two hours after sunset, and then only if the ecliptic is very steeply inclined to the horizon. Within 217 years, observers on Earth may watch Mercury passing as a black dot before the bright disk of the Sun on twenty occasions in November and on nine occasions in May. The next transit will be on 9 May 2016.

As Mercury's orbit is highly elliptical, its distance to the Sun differs greatly between aphelion and perihelion. At perihelion, the planet approaches the Sun to 46 million kilometers, counting from the Sun's center, while its distance grows to 70 million kilometers at aphelion. Because of its relative closeness to the Sun, it is fairly easy to demonstrate that the rotation of Mercury's perihelion is partly due to relativistic influences: it is the gravity pull of the Sun and, to a lesser extent, that of other planets that causes Mercury's perihelion to rotate slowly to the right around the center of gravity it shares with the Sun, so that in the long run the shape of its path around the Sun resembles a rosetta.

Mercury's rotation and orbital periods are linked, for it circles the Sun twice while it rotates three times around its axis. Consequently, a day/night period on Mercury extends over 176 terrestrial days. During that cycle, surface temperatures fluctuate between -180 and + 430 degrees centigrade.

The smallest planet in the Solar System, Mercury is smaller even than the Jovian moon Ganymed and the Saturnian moon Titan. Nevertheless, its mean density is comparable to that of Earth, which leads scientists to assume that Mercury must have a relatively extensive and heavy core of iron and nickel. Measurements show that the strength of Mercury's magnetic field is about one percent of Earth's.

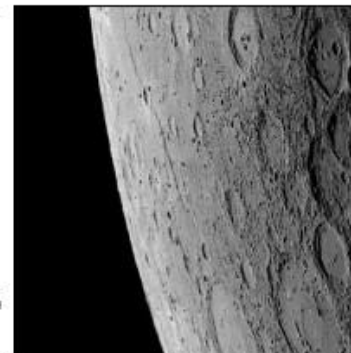


Figure 1: Picture: View to the limb of Mercury. Prominent towards the horizon is a long cliff face extending for more than 600 kilometers. This scarp is a result of contraction due to the planet's cooling. (© NASA/JHUAPL/Carnegie Institution of Washington)


Mass	3.302×10^{23} kg
Radius	2,439.7 km
Density	5.427 g/cm^3
Rotation period	58.65 days
Orbital period	88 days
Mean Distance from the Sun	57.91×10^6 km



Node: Atmospheres / Paris



IDIS Integrated and Distributed Information Service
Atmospheres node





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EUROPLANET RI
Host institute **IPSL**

HOME

SEARCH

SC 2.1 - Titan Ion Chemistry

SC 2.2 - Methane Spectroscopy

SC 2.3 - Mars Global Climate

SC 2.4 - Venus Super-rotation

SC 2.5 - Titan & Its Tholins

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LINKS

SITE MAP

CREDITS

Introduction to the thematic nodes of IDIS

This website is dedicated to the thematic field of Atmospheres as part of the Integrated and Distributed Information Service (IDIS) developed during the EUROPLANET projects FP6 and FP7. In general the IDIS System is divided into the thematic nodes and one technical top node.

The EuroPlanet IDIS thematic science node about atmospheres is hosted by the **Observatoire de Versailles Saint-Quentin-en-Yvelines (OVSG)** of the Institut Pierre-Simon Laplace (IPSL) and is established in close cooperation with the **Laboratoire Atmosphère, Milieux, Observations Spatiales (LATMOS)** (ex Service d'Aéronomie).

The EuroPlanet IDIS thematic science nodes (**Planetary Surfaces and Interiors, Atmospheres, Plasma Science, Small Bodies and Planetary Dynamics**) are dedicated to open a web window to the status of solar system research and provide an effective information management system for scientists and interested persons about solar system knowledge, databases and scientific tools.

The main aim of the Atmospheres Node will be to:

- support collaborative work in the field of Atmospheres;
- provide information about databases and scientific tools in this field;
- establish a scientific information management;
- define and develop Science Cases regarding IDIS.

These are the specific science cases related to Atmospheres:

- [Science Case 2.1: Titan Ion Chemistry](#)
- [Science Case 2.2: Methane Spectroscopy](#)
- [Science Case 2.3: Mars Global Climate](#)
- [Science Case 2.4: Venus Super-rotation](#)
- [Science Case 2.5: PAMPRE Experiment](#)

NEWS

COSPAR 2010

The 35th scientific assembly of the Committee on Space Research will take place from 16th to 25th July 2010 in the beautiful Hanseatic city of Bremen, Germany.

[More information](#)

EPSC 2010

The 5th European Planetary Science Congress will take place in Rome, Italy, from 19th to 25th September 2010.

[More information](#)

Atmospheres: Titan Ion Chemistries



EUROPLANET RI
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SEARCH

SC 2.1 - Titan Ion Chemistry

- Data

- Databases
- Models & Outputs
- Experts & Bibliography
- Open Questions

SC 2.2 - Methane Spectroscopy

SC 2.3 - Mars Global Climate

Science Case 2.1 - Titan Ion Chemistry: Data

● GAPHYOR


- Content: Bibliographical database on the Properties of Atoms, Molecules, Gases and Plasmas, including Chemical Reactions;
- Creator(s): LPGP, Univ. Paris-Sud, Orsay, France;
- Comments:
- References:
- Medium: Database Interface;
- Simplified form: Enter formula with all elements counts (ex: C1H4 for CH₄) and charge ("+", "-" or nothing):

Formula: Charge:

● AMEDAS (Atomic and Molecular Bibliographical Database)






- Content: Atomic and Molecular Bibliographical Database;
- Creator(s): International Atomic Energy Agency, Nuclear Data Section/Atomic and Molecular Data Unit, Vienna, Austria;
- Comments:

Atmospheres: Atmosphere Simulation



PAMPRE

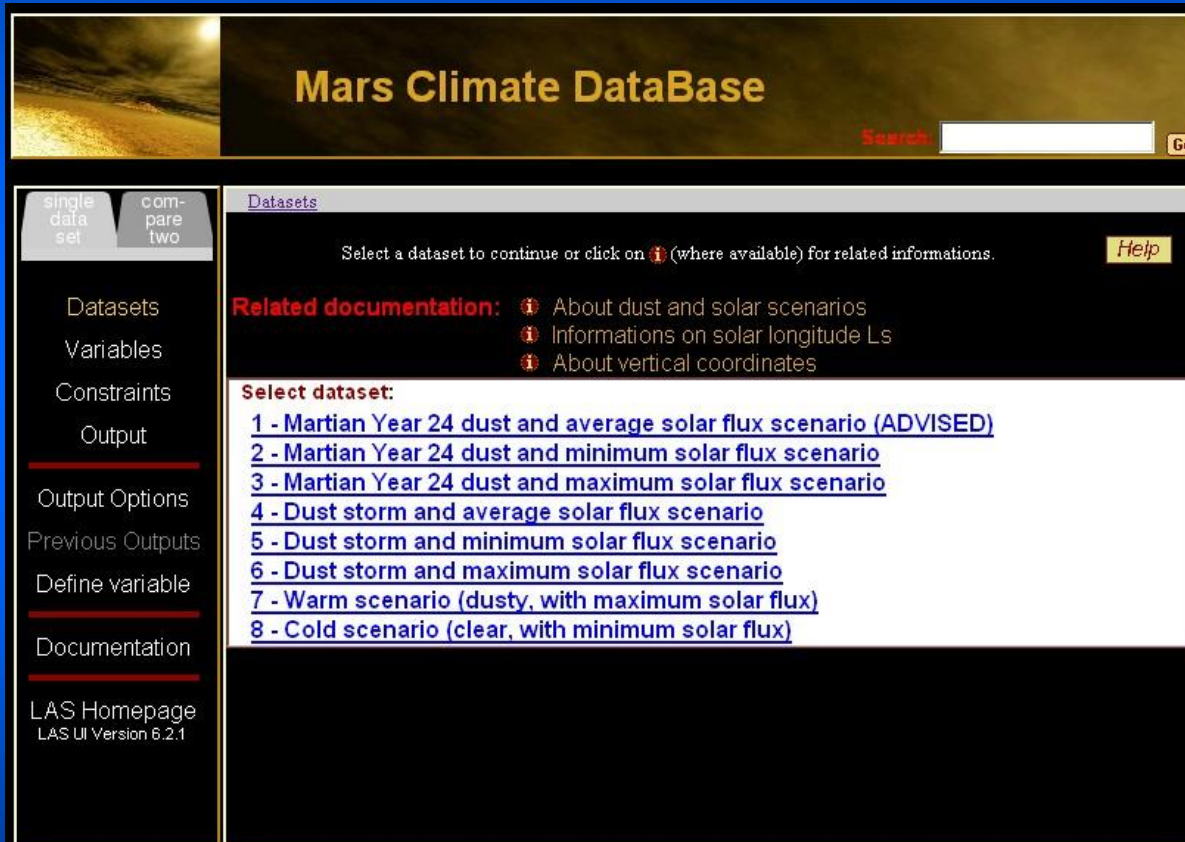
Experimental Simulation of Planetary Atmospheres

UVSQ
UPMC
LATMOS
IPSL
CNRS
BDAP
EUROPLANET

Home	<div style="text-align: center; color: #8b4513; font-weight: bold; font-size: 1.2em;">Home</div> <hr style="border: 0.5px solid #8b4513; margin: 10px 0;"/> <p style="text-align: center; font-weight: bold; color: #000080;">Synthesis, production and study of Titan's Tholins equivalent thanks to Nitrogen-Methane radiofrequency dusty plasma</p> <p>Titan's atmosphere has the property to produce organic aerosols all over the satellite. These aerosols have a major impact on Titan's climate and could also be interesting for astrobiology due to the so called <i>prebiotic chemistry</i> leading to their formation. But there is a little direct data on the physical and chemical properties of these aerosols.</p> <p>PAMPRE Experiment (French acronym for Aerosols Microgravity Production by Reactives Plasmas) aims to study the process of formation of these aerosols and their properties. The way of study is to produce these so called <i>Tholins</i> in our lab, trying to reproduce Titan's main conditions applied on a mixture of Nitrogen and Methane.</p> <p>Produced Tholins can be studied after production by different analysis, both locally and by other teams. It can also be used as reference material for the treatment of experimental data of Cassini-Huygens NASA-ESA space probe dedicated to the study of Saturn's system, including Titan</p> <p style="text-align: center; font-weight: bold; color: #000080;">Contact for the PAMPRE Working Group:</p> <p>Pr. Guy Cernogora, guy.cernogora[at]latmos.ipsl.fr LATMOS</p>
The Experiment	
1. Scanning Electron Microscopy	
1.1 SEM Pictures	
1.2 Analysed data and Statistics	
2. Optical Emission Spectroscopy	
2.1 UV OES [370.5-394nm]	
2.2 R-IR OES [793-814 nm]	
3. Mass Spectroscopy	
4. Light Scattering	
5. Thermogravimetry	
6. VdC	

Atmospheres: Mars Climate DB



Mars Climate DataBase

Search:

single data set | compare two

Datasets

Select a dataset to continue or click on **i** (where available) for related informations. [Help](#)

Related documentation:

- i** About dust and solar scenarios
- i** Informations on solar longitude Ls
- i** About vertical coordinates

Select dataset:

- [1 - Martian Year 24 dust and average solar flux scenario \(ADVISED\)](#)
- [2 - Martian Year 24 dust and minimum solar flux scenario](#)
- [3 - Martian Year 24 dust and maximum solar flux scenario](#)
- [4 - Dust storm and average solar flux scenario](#)
- [5 - Dust storm and minimum solar flux scenario](#)
- [6 - Dust storm and maximum solar flux scenario](#)
- [7 - Warm scenario \(dusty, with maximum solar flux\)](#)
- [8 - Cold scenario \(clear, with minimum solar flux\)](#)

[Datasets](#)
[Variables](#)
[Constraints](#)
[Output](#)

[Output Options](#)
[Previous Outputs](#)
[Define variable](#)

[Documentation](#)

[LAS Homepage](#)
 LAS UI Version 6.2.1

Atmospheres: Astrochemistry DB

UMIST
uofa⁰⁶

The UMIST Database for Astrochemistry
Woodall, Agúndez, Markwick-Kemper, Millar

CH₃⁺

Search

e.g. CH₃⁺
e.g. H₃CO⁺ + e-
e.g. carbon and molecular hydrogen
e.g. geppert

or Select a species...

or Do something else...



Atmospheres: Astrochemistry DB



or

or

Found 141 'CH3+' reactions, showing 1 - 50 next 50

Reaction	α	β	γ	$T_l - T_u$ (K)	Accuracy	Source
1 $C + CH_3^+ \rightarrow C_2H^+ + H_2$	1.20E-09	0.00	0.0	10 - 41000	factor 2	Lit. Search
2 $C^+ + CH_3OH \rightarrow HCO + CH_3^+$	2.08E-09	0.00 / -0.50	0.0	10 - 41000	within 25%	Measurement
3 $CH + CH_3^+ \rightarrow C_2H_2^+ + H_2$	7.10E-10	0.00 / -0.50	0.0	10 - 41000	factor 2	Lit. Search
4 $CH^+ + CH_3OH \rightarrow H_2CO + CH_3^+$	1.45E-09	0.00 / -0.50	0.0	10 - 41000	within 25%	Measurement
5 $CH^+ + H_2CO \rightarrow CO + CH_3^+$	9.60E-10	0.00 / -0.50	0.0	10 - 41000	within 25%	Measurement
6 $CH_2 + C_2H^+ \rightarrow C_2 + CH_3^+$	4.40E-10	0.00	0.0	10 - 41000	factor 2	Lit. Search
7 $CH_2 + CH_3^+ \rightarrow C_2H_3^+ + H_2$	9.90E-10	0.00	0.0	10 - 41000	factor 2	Lit. Search
8 $CH_2 + CH_5^+ \rightarrow CH_4 + CH_3^+$	9.60E-10	0.00	0.0	10 - 41000	factor 2	Lit. Search
9 $CH_2 + H_2CO^+ \rightarrow HCO + CH_3^+$	4.30E-10	0.00	0.0	10 - 41000	factor 2	Lit. Search
10 $CH_2 + H_2O^+ \rightarrow OH + CH_3^+$	4.70E-10	0.00	0.0	10 - 41000	factor 2	Lit. Search
11 $CH_2 + H_3O^+ \rightarrow H_2O + CH_3^+$	9.40E-10	0.00	0.0	10 - 41000	factor 2	Lit. Search
12 $CH_2 + HCN^+ \rightarrow CN + CH_3^+$	8.70E-10	0.00	0.0	10 - 41000	factor 2	Lit. Search
13 $CH_2 + HCNH^+ \rightarrow HNC + CH_3^+$	4.35E-10	0.00	0.0	10 - 41000	factor 2	Lit. Search
14 $CH_2 + HCNH^+ \rightarrow HCN + CH_3^+$	4.35E-10	0.00	0.0	10 - 41000	factor 2	Lit. Search
15 $CH_2 + HCO^+ \rightarrow CO + CH_3^+$	8.60E-10	0.00	0.0	10 - 41000	factor 2	Lit. Search

Atmospheres: Bibliography DB

AMBDAS

Atomic and Molecular Bibliographic Data System

Available Reactant/Surface Codes	Reactant Code	Ion Charge
? Reactant 1	<input type="text" value="H, Na, H2O, HF"/>	<input type="text" value="2, 26, -1"/>
Reactant 2	<input type="text" value="H, Na, H2O, HF"/>	<input type="text"/>
? Isoelectr. Sequence	<input type="text" value="H, Be, Ca"/>	
? Surface	<input type="text" value="Mg, Ag2O, Metal"/>	

Examples are given in green

Attention: the codes are **case-sensitive**, i.e., 'Hf' is *Hafnium* and 'HF' is *Hydrogen-Fluorine*

Category	Process
<ul style="list-style-type: none"> Structure and Spectra Photon Collisions Electron Collisions Heavy Particles Collisions Surface Interactions Beam Heating and Fueling of Plasmas 	<ul style="list-style-type: none"> — Structure and Spectra — Line Shapes and Shifts Structure, Spectra Interatomic Potentials Polarizabilities, Electric moments Energy Levels, Wavelengths

Bibliography

? Author's name	<input type="text" value="Mott, N*Mott, *stein*"/>	2nd author's name	<input type="text"/>
? Keywords/Patterns	<input type="text" value="res*ance, *electron impact*"/>		
Years	<input type="text" value="98, 1998, 02, 2002"/>	Reference Type	<input type="text"/>

Sort by Year: | Abstract/Comment: | Search Case Sensitive: **The maximal allowed number of references is 200.**

Node: Plasmas / Graz - Toulouse



IDIS Integrated and Distributed Information Service
Plasma Node



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EUROPLANET RI

Host Institute **IWF**

Partner Institute **CDPP**

NEWS & EVENTS

SEARCH (NEW)

SC 3.1 - Solar wind and aurorae

SC 3.2 - Internal electro-dynamics at giant planets

SC 3.3 - Icy moons: magnetospheric interactions

SC 3.4 - Planets at extreme conditions

AMDA 1.0

NRI

Node Resource Inventory

TWIKI

Introduction to the thematic nodes of IDIS

This website is dedicated to the thematic field of *Plasma Physics* as part of the **Integrated and Distributed Information Service (IDIS)** developed during the EUROPlaNet Project. In General the IDIS System is divided into five thematic nodes and one technical top node. **All nodes can be reached via the top menu.**

This thematic node is hosted by the **IWF Graz** and is established in close cooperation with **CDPP Toulouse**, which also takes part to the EUROPlaNet Project.

1. **IWF** (Space Research Institute) Graz: <http://www.iwf.oeaw.ac.at/>
2. **CDPP** (Plasmas Physics Data Centre) Toulouse: <http://cdpp.cesr.fr/>

A general description about the **IDIS - Science Cases** can be found here: [\(Details\)](#)

Here you can find a list of potential **participants** at the Plasma Node: [\(Details\)](#)

The main Aims of the Plasma Node will be to:

- Establish collaborative work in the field of Plasma Science at first within the EUROPlaNet participants.
- Exchange well established databases and scientific tools.
- Collect knowledge of effective Information Management.
- Define and precise Science Use Cases regarding IDIS.

A listing of the **Node's responsible areas** can be found here: [\(Details\)](#)

There are three "side-projects" running in the focus of Plasma Node:

News & Events

02/07/2010: Updated Plasma Node Report Section: [\(Details\)](#)

28/04/2010: Updated Science Case 3.3 Section: [\(View\)](#)

28/04/2010: Updated Science Case 3.2 Section: [\(View\)](#)

05/03/2010: Updated Resource Inventory [\(View\)](#)

Page Updates

02/07/2010

Plasmas: Search tool

[Login](#) | [Register](#)





EUROPLANET RI
NEWS & EVENTS
CONTACTS
CONSORTIUM AREA

OUTREACH
For the public
EPSC
European Planetary Science
Congress

NETWORKING
RESEARCH
FACILITIES
IDIS
Integrated and Distributed
Information Service

JOBS
DOCUMENTS & SERVICES
PLANETARY MEETINGS
International Planetary Science
Meetings Calendar

You are here: [Idis](#) > [Res](#)

[Presentation](#) [Resources](#) [Science Cases](#) [IDIS Nodes](#)

Resources Search

NOTE:
Use '['' as **keyword-separator** if you want to search for resources which contain **ANY entered keyword**;
Use '+' as **keyword-separator** if you want to search for resources which contain **ALL entered keywords**.

Please, enter keyword(s) to look for :

Filter Results by Node (scientific domain) :

Quicksearch

Quicksearch Resources by Target :

Quicksearch Resources by Mission :

Additional keywords associated to the search results

Target:

Plasmas: Solar Wind



IDIS TECH. NODE | INTERIORS & SURFACES NODE | ATMOSPHERES NODE | PLASMA NODE | SMALL BODIES & DUST NODE | PLANET. DYNAMICS NODE

EUROPLANET RI

Host Institute IWF

Partner Institute CDPD

NEWS & EVENTS

SEARCH (NEW)

SC 3.1 - Solar wind and aurorae

Scientific Topics

CMEs and Shocks in Solar Wind

Giant Planets magnetospheres

Moons influence on SKR

Satellite influences on aurorae

Solar Wind influence on HOM/DAM

Solar Wind influence on SKR

Ground-based facilities

Space-based facilities

SC 3.2 - Internal electro-dynamics at giant planets

SC 3.3 - Icy moons: magnetospheric interactions

SC 3.4 - Planets at extreme conditions

AMDA 1.0

NRI

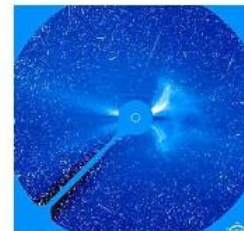
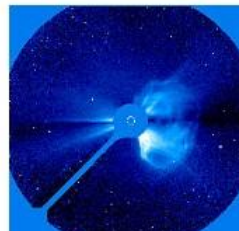
BACK TO SCIENTIFIC TOPICS

CMEs and Shocks in Solar Wind

Problem description:

Solar *Coronal Mass Ejections (CMEs)* are large-scale magnetized plasma structures carrying billions of tons of material that erupt from the Sun and propagate in the heliosphere, interacting in multiple ways with the solar wind (**Fig.1**). They appear to be a critical element in the solar dynamo which removes the dynamo-generated magnetic flux from the Sun and connects the internal dynamo processes to the external solar environment. The observational data on solar CMEs are related to two spatial domains: the near-Sun region (up to $30R_{sun} \approx 0,14$ AU) remote-sensed by coronagraphs; and the outer region, including the geo-space and beyond, where in-situ observations are made by spacecraft. The generic term used for CMEs in the solar wind is *ejecta*. Due to the existence of two spatial domains of observations, the term CME is usually applied for ejecta as they are observed near the Sun ($\leq 0,14$ AU), whereas at the larger distances they are traditionally called as *Interplanetary CMEs (ICMEs)*.

Traveling outward from the Sun at high speeds (up to thousands kilometers per second), CMEs create major disturbances in the interplanetary medium. Due to the high speed, intrinsic magnetic field and the increased density (as compared to the solar wind background), CMEs produce strong effects on the planetary environments and magnetospheres. Besides of the density and velocity disturbances created in the solar wind plasma, among the main planetary impact factors of CMEs, appear also the associated interplanetary shocks, energetic particles accelerated in the shock regions, and the magnetic field disturbances which create magnetic storms.



Plasmas: *Virtual Observatory*

*Automated Multi Dataset
Analysis*



Announcements

- 22.04.2010 : Duration filter and statistical information added in time table manager
- All Announcements

Welcome To AMDA

Version r2010-03-29 beta

A generic Webtool for Space Physics data :

- automated event search and characterisation
- catalogue generation and exploitation
- automated database conditional extraction
- access to remote Data Centers

First Visit : [Demo Tour ->](#)

AMDA ACCESS

login

passwd

[Register->](#)

or test AMDA as a guest

login: guest

passwd : your e-mail address

Node: Small Bodies & Dust




IDIS Integrated and Distributed Information System
Small Bodies and Dust Node





[IDIS Tech. Node](#) |
 [Interiors & Surfaces Node](#) |
 [Atmospheres Node](#) |
 [Plasma Node](#) |
 [Small Bodies and Dust node](#) |
 [Planetary Dynamics Node](#)

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SBDN Hosting Institute

[IFSI/INAF](#)

SBDN Internal Resources

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[Comet Emission Lines Search](#)

[Comet Nuclei Model](#)

SBDN External Resources

[Virtual Meteor Observatory](#)

SBDN Science Cases

S.C. 4.1: Relative Contribution to Zodiacal Cloud

Introduction to the thematic Nodes of IDIS

The EuroPlanet information service provides access to lists of researchers, laboratories and data archives relevant for many aspects of planetary and space physics. Information can be accessed via search tools in the top node or directly via services available in the different thematic nodes.

The IDIS Small Bodies and Dust Node (SBDN in the following) aims at becoming a focus point in the fields of Solar System's minor bodies and interplanetary dust by providing the community with a central, user friendly resource and service inventory and contact point. The EuroPlanet IDIS thematic science node "**Small Bodies and Dust Node**" is hosted by the Istituto di Fisica dello Spazio Interplanetario and is established in close cooperation with the Istituto di Astrofisica Spaziale. Both these institutes are part of the Istituto Nazionale di Astrofisica (INAF).



The main aim of the **Small Bodies and Dust Node** will be to:

SBDN: *Virtual Meteor Observatory*

VMO
IMO Node

Virtual Meteor Observatory
Node of the International Meteor Organization



Navigation

- ▼ Home
 - Standards
 - FAQ
 - Usage conditions
 - Reporting bugs
 - Links
- ▼ Sections
 - ▷ Observers
 - ▷ Locations
 - ▷ Camera systems
 - ▷ Camera observations
 - ▷ Visual observations
 - ▷ Showers
- ▷ Query and export

Observer login

IMO Code: *

Welcome to the database of the International Meteor Organization

You have reached the database of the International Meteor Organization (IMO), containing worldwide scientific observations of shooting stars (meteors) in the atmosphere of the Earth. This database is part of a *Virtual Meteor Observatory* (VMO), because it uses standard data formats and protocols. This allows other software tools and databases to be compatible.

The VMO is hosted with support from ESA RSSD and Europlanet.



Observer codes

- » Browse
- » Register



Location codes

- » Browse
- » Register



Camera systems

- » Browse
- » Register

SBDN: Zodiacal Cloud




IDIS Integrated and Distributed Information System
Small Bodies and Dust Node





[IDIS Tech. Node](#) |
 [Interiors & Surfaces Node](#) |
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SBDN External Resources

[Virtual Meteor Observatory](#)

Relative Contribution to Zodiacal Cloud

How should this node be used to obtain this information?

To use this node, you can go to our search tool and:

-Search in **Resource** keyword **Zodiacal dust** (for general information zodiacal dust)

-Search in **Resource** keywords **dust data, dust space telescope** (for information on the large scale view of zodiacal cloud)

-Search in **Mission** keywords **IRAS, COBE, ISO, SPITZER** (for information on the large scale view of zodiacal cloud)

-Search in **Resource** keyword **dust composition** (for information about the Dust grain composition)

-Search in **Resource** keyword **zodiacal dust model** (for information about models of zodiacal dust)

-Search in **Resource** keywords **laboratory zodiacal dust** (for information about laboratory data on dust)

-Search in the **Persons** section keyword **dust** (for information about experts on the previous topics).

Available Online Resources :

SBDN: *Other Resources*

SBDN Internal Resources

[SBDN Search](#)

[Comet Emission Lines Search](#)

[Comet Nuclei Model](#)

SBDN External Resources

[Virtual Meteor Observatory](#)

SBDN Science Cases

S.C. 4.1: Relative Contribution to
Zodiacal Cloud

[Overview](#)

[Objectives](#)

[Resources](#)

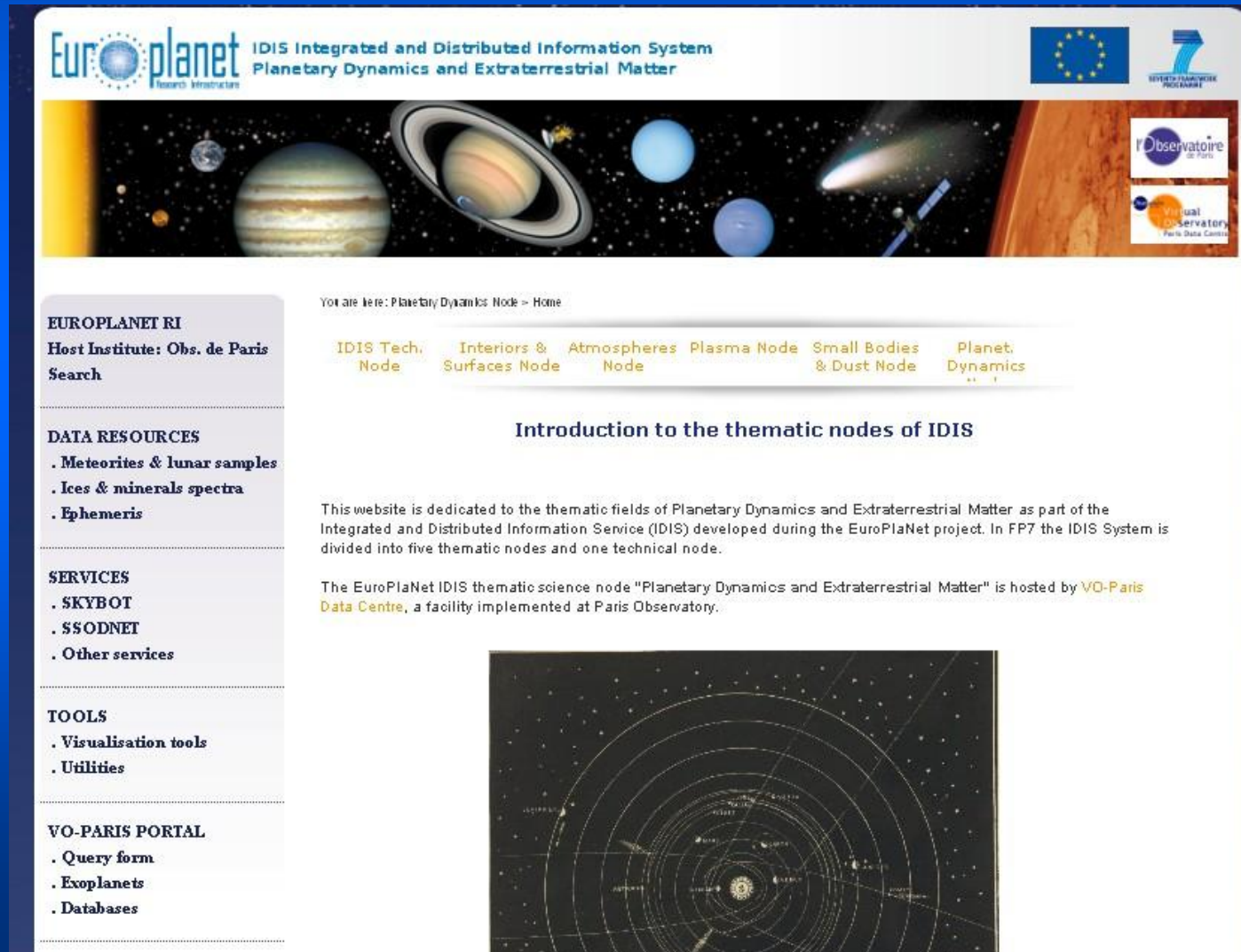
S.C. 4.2: Gas and Dust emission of
comet Churyumov-Gerasimenko
during Rosetta mission

[Overview](#)

[Objectives](#)

[Resources](#)

Node: Planetary Dynamics and Extraterrestrial Matter



Europlanet IDIS Integrated and Distributed Information System
Planetary Dynamics and Extraterrestrial Matter

Observatoire de Paris
Paris Data Centre

You are here: Planetary Dynamics Node > Home

[IDIS Tech. Node](#)
[Interiors & Surfaces Node](#)
[Atmospheres Node](#)
[Plasma Node](#)
[Small Bodies & Dust Node](#)
[Planet. Dynamics](#)

Introduction to the thematic nodes of IDIS

This website is dedicated to the thematic fields of Planetary Dynamics and Extraterrestrial Matter as part of the Integrated and Distributed Information Service (IDIS) developed during the EuroPlaNet project. In FP7 the IDIS System is divided into five thematic nodes and one technical node.

The EuroPlaNet IDIS thematic science node "Planetary Dynamics and Extraterrestrial Matter" is hosted by [VO-Paris Data Centre](#), a facility implemented at Paris Observatory.

EUROPLANET RI
Host Institute: Obs. de Paris Search

DATA RESOURCES

- . Meteorites & lunar samples
- . Ices & minerals spectra
- . Ephemeris

SERVICES

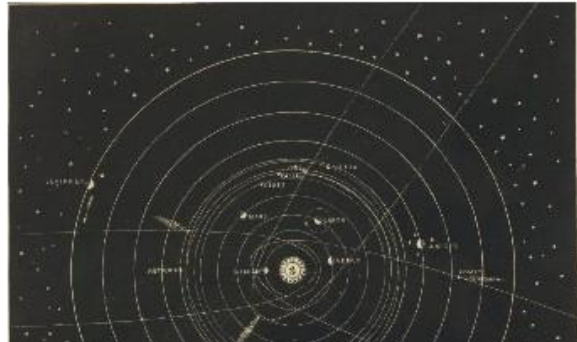
- . SKYBOT
- . SSODNET
- . Other services

TOOLS

- . Visualisation tools
- . Utilities

VO-PARIS PORTAL

- . Query form
- . Exoplanets
- . Databases



Planetary Dynamics: *Ephemeris*



IDIS Integrated and Distributed Information System
Planetary Dynamics and Extraterrestrial Matter



EUROPLANET RI

Host Institute: Obs. de Paris
Search

DATA RESOURCES

- . Meteorites & lunar samples
- . Ices & minerals spectra
- . Ephemeris

SERVICES

- . SKYBOT
- . SSODNET
- . Other services

TOOLS

You are here: Planetary Dynamics Node > Resources > Ephemeris

[IDIS Tech. Node](#)
[Interiors & Surfaces Node](#)
[Atmospheres Node](#)
[Plasma Node](#)
[Small Bodies & Dust Node](#)
[Planet. Dynamics Node](#)


Ephemeris

This page provides direct links to selected data resources.


The resource list is currently accessible at <http://www.europlanet-ri.eu>.

Name	Details
Solar System Ephemerides	based at IMCCE
HORIZONS	Solar system ephemerides
NeoDys	Near Earth Objects Dynamic Site

Planetary Dynamics: *Ephemeris*



INSTITUT DE MÉCANIQUE CÉLESTE ET DE CALCUL DES ÉPHÉMÉRIDES



RESEARCH

OK

MENU

- :: About IMCCE
- :: Publications
- :: Ephemerides
 - Ephemeris generator
 - Celestial phenomena
 - Databases
- :: General public
- :: The observer pages
- :: Academics

ASTRONOMICAL NEWS

- 2010-07-11 : Lutetia as though you were there
- 2010-07-10 : Lutetia takes the Stage
- 2010-06-30 : A giant water ice shell under the surface of the asteroid (90) Antiope ?
- 2010-06-11 : The comet McNaught

RSS ARCHIVES

VIRTUAL OBSERVATORY

NEWSLETTER

Quick navigation

ephemerides physiques

EPHEMERIDES FOR PHYSICAL OBSERVATION OF THE SOLAR SYSTEM BODIES

To observe from Earth at a given moment some points located at the surface of a solar system body, it is necessary to determine certain quantities related to its rotation and its apparent disc aspect. This is the aim of the ephemerides for the physical observation of the solar system bodies.

You can carry out calculations for any body of the solar system for one or more dates spread out on a time interval of which you will indicate the initial date, the number of dates and the step of calculation. The provided timescales are Terrestrial Time (TT) and the Coordinated Universal Time (UTC).

Use
Sources
Definitions
Parameters
Surface details
Credit
Copyright

Form

Select body

Sun

Planets:

<input checked="" type="radio"/> Mercury	<input type="radio"/> Venus	<input type="radio"/> Mars	<input type="radio"/> Jupiter
<input type="radio"/> Saturn	<input type="radio"/> Uranus	<input type="radio"/> Neptune	<input type="radio"/> Pluto

Natural satellites:

<input type="radio"/> Moon	<input type="radio"/> Ganymede (J-3)	<input type="radio"/> Dione (S-4)	<input type="radio"/> Miranda (U-5)
<input type="radio"/> Phobos (M-1)	<input type="radio"/> Callisto	<input type="radio"/> Rhea (S-5)	<input type="radio"/> Ariel (U-1)
<input type="radio"/> Deimos (M-2)	<input type="radio"/> Mimas (S-1)	<input type="radio"/> Titan (S-6)	<input type="radio"/> Umbriel (U-2)

Planetary Dynamics: *Sky BodyTracker*

THE IMCCE VIRTUAL OBSERVATORY SOLAR SYSTEM PORTAL

Observatoire de Paris / CNRS



[Portal Home Page](#) | [Contact us](#)

[SSODNet](#)

[Miriade](#)

[SkyBoT](#)

[Skybot 3D](#)

[AstroId](#)

[SsoTEP](#)

[VO Tools](#)

- SkyBoT - The Virtual Observatory Sky Body Tracker

Current version: SkyBoT2 - 2010-01-20

► **Presentation**

The SkyBoT (Sky Body Tracker) project has the ambition to provide to astronomers a VO tool useful to prepare and analyze solar system objects observations. The main usage of SkyBoT services concerns the seek and identification of solar system objects in astronomical images. To answer this challenge, we have built a database of pre-computed ephemeris of all of the known solar system objects, and we have developed a XML Web Service and various methods:

SKYBOT Cone-Search

This method allows you to seek and identify all the known solar system objects in a field of view of a given size (circle or box, up to 30°) at a given epoch (see SKYBOT Status method to know the covered period)

SKYBOT Resolver

Planetary Dynamics: *Meteorites*



THE METEORITICAL SOCIETY
International Society for Meteoritics and Planetary Science

USGS
science for a changing world


[Home](#) [News & Events](#) [Publications](#) [Membership](#) [Resources](#) [Search](#) [Contact us](#)

Search the Meteoritical Bulletin Database

Last update: 12 Jul 2010

Search for:	Search type:	Search limits:	Display:	Publication:
<input checked="" type="radio"/> Names	<input checked="" type="radio"/> Contains	<input type="text" value="All countries"/>	<input type="text" value="Link to Google Earth"/>	<input type="text" value="All bulls"/>
<input type="radio"/> Text 	<input type="radio"/> Starts with	<input type="text" value="All classes"/>	<input type="text" value="Sort by name"/>	What's new in the last: <input type="text" value="(no time limit)"/>
<input type="radio"/> Places	<input type="radio"/> Exact	<input type="checkbox"/> NonAntarctic	<input type="text" value="50 lines/page"/>	
<input type="radio"/> Classes	<input type="radio"/> Sounds like	<input type="checkbox"/> Falls	<input type="text" value="Normal table"/>	
		<input type="checkbox"/> Has photo	<input type="checkbox"/> Limit to approved meteorite names	
Search text: <input type="text"/>	<input type="button" value="Search!"/>		<input type="button" value="Reset"/>	

Database stats: 39133 valid meteorite names; 11964 provisional names; 4582 full-text writeups.

News feed for newly approved meteorites: 

Data sources:

- [The Catalogue of Meteorites](#): 2002 June (current through *Met. Bull.* 87).
- [MetBase](#): v7.2 (current through *Met. Bull.* 89).
- [Antarctic Meteorite Newsletter](#): through 33(1), 2010 February.
- [Meteorite Newsletter \(NIPR\)](#): through v.19, 2010 March.
- [Meteoritical Bulletin](#): through *Met. Bull.* 97, 2010.

Planetary Dynamics: Mineralogy DB

Mineralogy Database

Search Webmineral

Home | Crystal | jmol | jPOWD | Chem | X Ray | Dana | Strunz | Properties | A to Z | Images

News | Help | About

Info:

- Mineral Definition
- What's New
- Advertising
- Search
- Links
- Webmaster
- JAVA Crystals
- HELP

The Mineralogy Database was last updated on 12/31/2009 and it contains 4,714 individual mineral species descriptions with links and a comprehensive image library. Visit the "[What's New](#)" section for details.

Each mineral has a page linked to tables devoted to crystallography, crystal structures, X-Ray powder diffraction, chemical composition, physical and optical properties, Dana's New classification, Strunz classification, mineral specimen images, and alphabetical listings of mineral species. There also are extensive links to other external sources of mineral data and information.

Today is Monday, 19-Jul-2010 06:17:26 CDT

Factoid #18

All the **gold** mined in the past 6,000 years in the whole world would fit inside a baseball diamond (84'x84'x84') or (25.6m,25.6m,25.6m)and would weigh 145,000 metric tonnes.

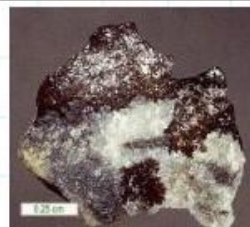
This amount of gold could make 3,836,043,358.8 one troy ounce gold coins if the gold was 24 karat pure.

Random Images from 3,700 Minerals



Junoite

© Tom Loomis / Dakota Matrix



Algodonite

© Jeff Weissman / Photographic Guide to Mineral Species



Offretite

© Lou Perloff / Photo Atlas of Minerals



Cannizzarite

© Richard Dale / Dale Minerals

Babelfish

Translation:

- Français
- Español
- Italiano
- Deutschen
- Portuguêses
- 日本語
- 한국어
- 汉语

Help Index:

- Avial Botics

Translate with Intertran



Translate using InterTran (tm)

Translate

Please MOVE AND HOLD your MOUSE CURSOR over the little DOWN ARROWS in the translated web page in order to see a pop-up window with ALTERNATIVE TRANSLATIONS.

Planetary Dynamics: *Minerals*

Home Page	Log In	Message Board	The Min
Register	Search Pages	Chat Now! (2 online)	Mindat A

Alphabetical Index of Minerals, Varieties, Synonyms and other names

The database contains thousands of mineral names, varietal names, synonyms, discredited names and other names. You can use this alphabetical index to help you navigate.

A: Aabam to Azzurrite

B: Bababudanit to Byzantievite

C: Ca- and Sr-rich Baryte to Cziklovaite

D: D'Achiardit to Dzintars

E: Eakerit to Ezüst

F: Fabianit to Fyzelyite

G: Gaargoti to Gysinite-(Nd)

H: Hồ phách to Hyttsjöite

I: Ianthinit to Iztäctepoztli

J: Jáchymovit to Juxporite

K: Kaadmium to Kyzylkumite


L: Labrador to Læwigita

M: M40 to Mysorin

N: Na Alum to Nyholmite


O: Oakermanit to Ozokerite

Planetary Dynamics: *Mars Analog Spectra*



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

- + NASA Homepage
- + NASA en Español
- + Contact NASA



PDS Geosciences Node
Washington University in St. Louis

HOME DATA AND SERVICES TOOLS ABOUT US CONTACT US SITE MAP

Services

Analyst's Notebooks
Orbital Data Explorers
FTP Access
Workshops

Geosciences Node Data

Mars
Venus
Mercury
Moon
Earth
Asteroids
All Geosciences Data Holdings

Quick Links

Frequently Asked Questions

CRISM Spectral Library

The CRISM Spectral Library is a collection of laboratory spectra of Mars-analog materials supplied by the CRISM Team. The spectra will be used to compare with spectra acquired by CRISM.

More information about CRISM is available on the [CRISM web site at APL](#).

Spectral Library Interface

This [web interface to the Spectral Library](#) allows searching, viewing, and downloading of individual spectra.

Online Data

The Spectral Library is stored as a standard PDS archive volume that may be accessed by web or FTP (see below).

[root directory](#)

Top level of data set

Planetary Dynamics: *Visualisation Tools*




IDIS Integrated and Distributed Information System
 Planetary Dynamics and Extraterrestrial Matter

EUROPLANET RI
 Host Institute: Obs. de Paris
 Search

DATA RESOURCES

- . Meteorites & lunar samples
- . Ices & minerals spectra
- . Ephemeris

SERVICES

- . SKYBOT
- . SSODNET
- . Other services

You are here: Planetary Dynamics Node > Tools > Visualisation

- IDIS Tech. Node
- Interiors & Surfaces Node
- Atmospheres Node
- Plasma Node
- Small Bodies & Dust Node
- Planet. Dynamics Node**

Visualisation Tools

These links provide access to selected VO tools:

Name	Details
Aladin	an interactive software sky atlas allowing the user to visualize digitized astronomical images, superimpose entries from astronomical catalogues or databases

Future of Europlanet-RI / IDIS

- Extension of available information
- Access tools to access and combine data of different fields and different sources (Virtual Observatories)
- Intensive co-operation with scientists across Europe and beyond

Web Access Addresses:

Technical node for support and management aspects:

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

Planetary Surfaces and Interiors node:

<http://www.idis-interiors.europlanet-ri.eu/>

Plasma node:

<http://www.idis-plasma.europlanet-ri.eu/>

Atmospheres node:

<http://www.idis-atmos.europlanet-ri.eu/>

Small Bodies and Dust node:

<http://www.idis-sbdn.europlanet-ri.eu/>

Planetary Dynamics and Extraterrestrial Matter node:

<http://www.idis-dyn.europlanet-ri.eu/>