Europlanet-RI: Access to Planetary Data, Tools, Models and Support Information

Grant agreement 228319

SEVENTH FRAMEWORK PROGRAMME
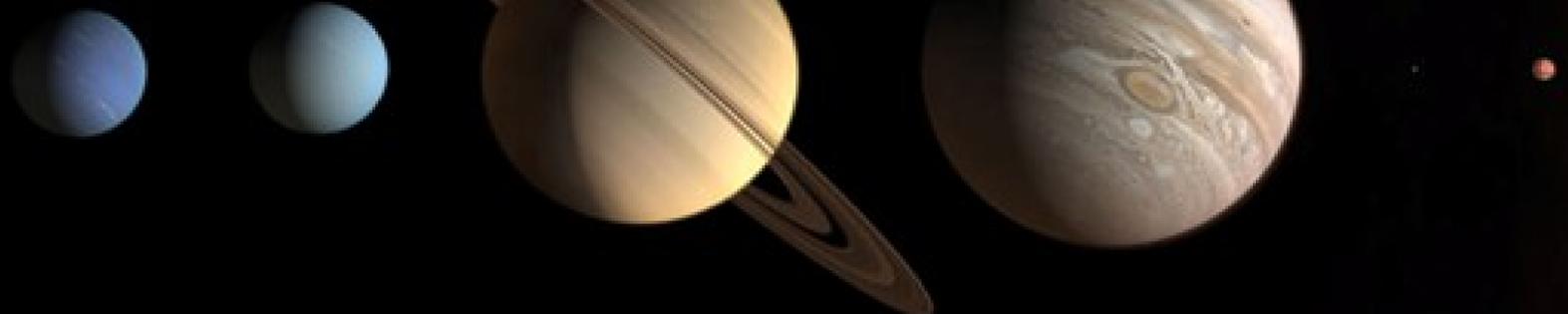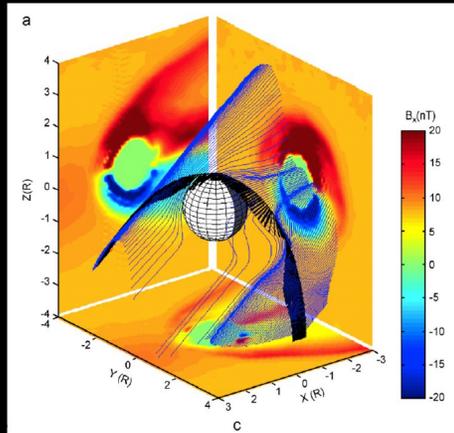
Services

➢ Access to a wide range of planetary science data from ESA, NASA and other national space agencies without detailed data format knowledge

➢ Combining data from space-born instruments, ground-based instruments, laboratory data and modeling results in a Virtual Observatory

➢ Access to support information for data analysis and instrument development and testing

➢ Tools for image mapping, time progagation through space, orbit calculations for solar system objects etc.

➢ Spectral data base for atmospheric research

➢ Spectral data base for planetary surface materials

➢ Chemical processes data base

➢ Modeling of planetary atmospheres, plasma environments, comet development etc

➢ Contact information including capabilities for ground observation facilities, laboratories, reference sites, research institutes and researcheres in the field

➢ Support for integration of new data archives into the access service

➢ Access to data via Graphical User Interface and Virtual Observatory tools for further integration into other applications

➢
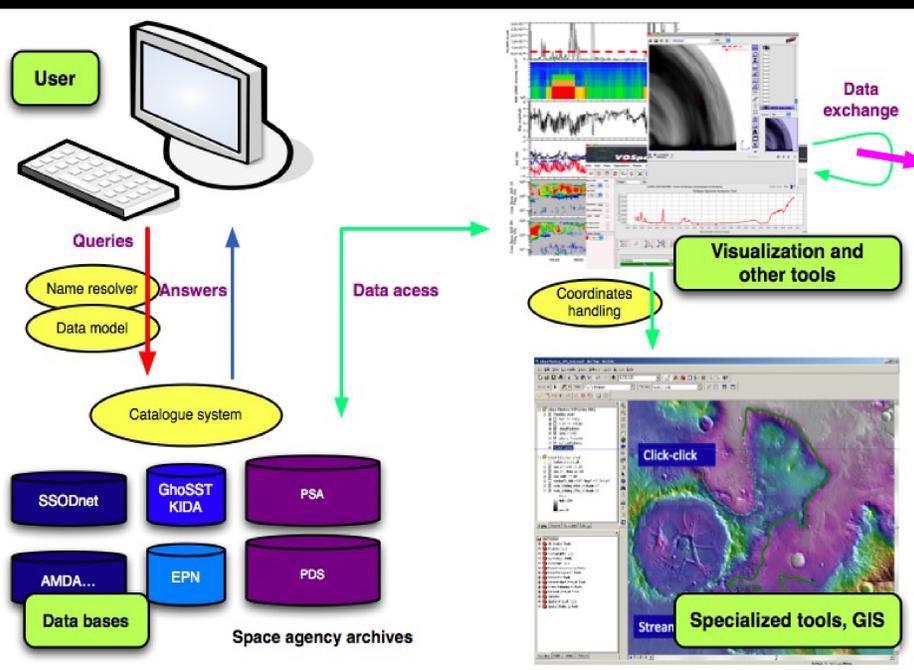
Solid Spectroscopy Data Model (SSDM)

GhoSST
"Grenoble Astrophysics and Planetology Solid Spectroscopy and Thermodynamics" database service

Bernard Schmitt, Damien Albert
and the SSDM Expert group*

Institut de Planétologie et Astrophysique de Grenoble (former LPG), CNRS / UJF

General aims and (current) limitations

To describe:
- Most **Solid samples** and their internal structure, up to some degree of complexity, from layers down to atoms
    - synthetic and natural materials, simple to complex
    - adsorption on / absorption in solids, processed solids, …

- All **spectroscopic techniques** from VUV up to mm
    - absorption, reflection (all types), emission, Raman, fluorescence, micro-spectrometry, ellipsometry, ATR, …

- All associated types of **spectra and their products**
    - from raw calibrated spectra (level 1) to, e.g., optical constants (level 4)

- **Individual vibration bands** of molecules and molecular ions in molecular solids and ad/absorbed on/in other solids   *(no mineral/rocks except as substrate)*

KIDA
Kinetic Database for Astrochemistry

KIDA is a database of kinetic data of interest for astrochemical (interstellar medium and planetary atmospheres) studies. In addition to the available referenced data, KIDA provides recommendations over a number of important reactions.

Chemists and physicists can add their data to the database through several paths listed here. Astrophysicists can download the database through the download form. You need to log in to add or download data. Forms below allows to consult and download the data.

The website will be improved little by little so the database may not be accessible time to time. Data will also be implemented later in the database especially data for planetary atmospheres.

Search for reactions

Indicate a species (ex: CH, H3O+) or a couple of species (ex: C + H2)

Species name* _____

Search in
◉ Isomers   ◯ Exact formula

◯ Reactant ◯ Product ◉ Both

◉ Ion + neutral ◯ Neutral

Compute rate coefficient at 10 K

Type of reaction
All

search

User — **Queries** — Name resolver — Data model — Catalogue system — **Answers** — **Data acess** — Coordinates handling — **Data exchange** — **Visualization and other tools** — Click-click — Stream — **Specialized tools, GIS**

SSODnet — GhoSST KIDA — PSA — AMDA... — EPN — PDS — **Data bases** — Space agency archives

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