EPSC
European Planetary Science Congress

Planetary Science Resource Data Model

B. Cecconi (1), J. Berthier (2), N. Bourrel (3), M. Gangloff (3), S. Erard (1), P. Le Sidaner (4), N. André (3), C. Jacquey (3), N. Lormant (5), and the IDIS Data Model SWG
(1) LESIA, CNRS-Observatoire de Paris, Meudon, France, (2) IMCCE, CNRS-Observatoire de Paris, Paris, France, (3) IRAP, CNRS-Université Paul Sabatier, Toulouse, France, (4) Observatoire de Paris, Paris, France, (5), AKKA, Toulouse, France. (Baptiste.Cecconi@obspm.fr / Fax: +33-145072806)

Abstract

One the goals of the Europlanet/IDIS project is the prototyping a Planetary Sciences Virtual Observatory (VO). Planetary sciences are covering several science thematics: atmospheres, surfaces, interiors, small bodies, orbital parameters, in situ exploration, plasma (waves, particle and fields), radio astronomy... They also include a large variety of data types: images, spectra, times series, movies, dynamic spectra, profiles, maps... and an even larger variety of physical parameters, including remote data, in-situ data, models, lab experiments, field analogs. The main challenge is thus to be able to homogeneously describe all the planetary science resources (dataset, files, services...). The skeleton of a such a description is the data model.

The Planetary Science Resource Data Model (PSR-DM) has been built using IVOA (International Virtual Observatory Alliance). We describe the content of Datasets and Granules (i.e., product, file, or the smallest granularity distributed by the service), not the access to the data. This description includes: Resource identification, Targets, Instruments (including hosting facility), Axis (including bounds, resolution, sampling, unit), Physical parameter (including UCD, unit).

Acknowledgments

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[1] http://www.europlanet-ri.eu/