



## **“Giant Planets Aurorae” Europlanet RI Science Case in the Working Packages**

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### **Abstract**

The FP7 Europlanet Research Infrastructure is a full “infrastructure network” supporting and enhancing the use of space missions, earth-based telescopes, simulation and data analysis tools, as well as lab and field site facilities. The project addresses two main scientific objectives, (1) science activities in support to the optimal use of data from past and present space missions, and (2) science activities in support to the preparation of future planetary missions. It is organized by a combination of three types of activities (i.e. working packages): (1) Networking Activities (NA), (2) TransNational Access (TNA) and Service Activities (SA), and (3) Joint Research Activities (JRA).

The Science Case poster illustrates Europlanet RI through the working packages where applicable, applied to the scientific topic “Giant Planets Aurorae”. Pictures, interactive zooming into the different types of activities, and hyperlinks to more detailed documents give an overview of Europlanet RI, and of the interactions between the different working packages. It is planned to install a laptop in front of the poster to give interested people the opportunity of exploiting the whole information of the interactive poster.

### **1. Introduction**

The seventh framework program FP7 of the European Union continues the prosperous and successful project Europlanet FP6. The 2009 to 2013 time window of FP7 is placed just after a series of successful missions which have produced and will continue to produce a large volume of data, before starting a new series of future missions. The central aim of Europlanet RI is to overcome the current fragmentation of the EU planetary science

community. Therefore it will (1) consolidate the integration of the planetary science community which started with Europlanet’s FP6 Coordination Action, and (2) integrate a major distributed European infrastructure to be shared, fed and expanded by all planetary scientists.

Europlanet RI is organized by a combination of three types of activities, each comprising several working packages: (1) Networking Activities (NA), (2) TransNational Access (TNA) and Service Activities (SA), and (3) Joint Research Activities (JRA).

NAs are divided into four sub-activities (i.e. working packages), the Scientific Networking Activities NA1 and NA2, the Outreach Activity NA3, and the Dissemination Activity NA4. All of these packages deliver inputs into the Science Case “Giant Planets Aurorae”. NA1 organizes workshops (e.g. Workshop on „Aeronomy of Jupiter’s and Saturn’s System“ in Liège, October 18-20, 2010) in close cooperation with NA2 and its working groups. NA3 will provide information on those workshops for the European public, whereas NA4 ensures the efficient communication between the scientific and the public community. The TransNational Access and Service Activities provide services and tools to the community, like remote access to Cassini magnetosphere data or Cassini high-resolution auroral data. Data attained by these facilities feed into Joint Research Activities and vice versa. JRAs are responsible for the improvement of services provided by TNAs and SAs, for instance resulting in data analysis tools for planetary radio astronomy and Space Weather.

The Science Case “Giant Planets Aurorae” illustrates Europlanet RI and its infrastructure through all these working packages by the use of one attractive theme. Pictures, interactive zooming into the different types of activities, and hyperlinks to more detailed

documents give an overview of Europlanet RI, and of the interactions between different working packages. The poster provides an example of how these activities contribute to the scientific theme of “Giant Planets Aurorae”, and how they interact with each other. The overall structure of Europlanet RI is characterized in one clearly arranged way and can be analysed in more details by using the laptop in front of the poster.

