EPSC Abstracts
Vol. 11, EPSC2017-180-1, 2017
European Planetary Science Congress 2017

Planetary data distribution by the French Plasma Physics Data Centre (CDPP): the example of Rosetta Plasma Consortium in the perspective of Solar Orbiter, Bepi-Colombo and JUICE

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The French Plasma Physics Data Centre (CDPP, http://www.cdpp.eu/) has been addressing for almost the past 20 years all issues pertaining to natural plasma data distribution and valorization. Initially established by CNES and CNRS on the ground of a solid data archive, CDPP activities diversified with the advent of broader networks and interoperability standards, and through fruitful collaborations (e.g. with NASA/PDS). Providing access to remote data, designing and building science driven analysis tools then became at the forefront of CDPP developments. In the frame of data distribution, the CDPP has provided to the Rosetta Plasma Consortium (RPC), a suite of five different plasma sensors, with the possibility to visualize plasma data acquired by the Rosetta mission through its data analysis tool AMDA. AMDA was used during the operational phase of the Rosetta mission, facilitating data access between different Rosetta PI sensor teams, thus allowing 1/ a more efficient instruments operation planning and 2/ a better understanding of single instrument observations in the context of other sensor measurements and of more global observations. The data are now getting open to the public via the AMDA tool as they are released to the ESA/PSA. These in-situ data are complemented by model data, for instance, a solar wind propagation model (see http://heliopropa.irap.omp.eu) or illumination maps of 67P (available through http://vespa.obspm.fr). The CDPP also proposes 3D visualization tool for planetary / heliospheric environments which helps putting data in context (http://3dview.cdpp.eu); for instance all comets and asteroids in a given volume and for a given time interval can be searched and displayed. From this fruitful experience the CDPP intends to play a similar role for the forthcoming data of the Solar Orbiter, Bepi-Colombo and JUICE missions as it is officially part of several instrument consortia. Beside highlighting the current database and products, the presentation will show how these future data could be presented and valorized through a combined use of the tools and models provided by the CDPP.