HWA modelling web services for the IMPEx infrastructure

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The EU-FP7 Project "Integrated Medium for Planetary Exploration", IMPEx [1], was established as a result of scientific collaboration between institutions across Europe and is working on the integration of a set of interactive data analysis and modeling tools in the field of space plasma physics. These tools are comprised of numerical hybrid/MHD and analytical Paraboloid magnetospheric models from the simulation sector as well as from the data analysis and visualization sector (AMDA, ClWeb, 3DView). The basic feature of IMPEx consists in connection of different data sources, including archived computational simulation results and observational data, in order to analyse and visualize scientific data by means of interactive web-based tools.

In this presentation we introduce a web service, Hybrid Web Archive, HWA [2], which enables access to the simulation runs made by HYB and GUMICS models included in the IMPEx HMM (Hybrid and Magnetohydrodynamic Modelling) environment. The HYB hybrid model and the GUMICS MHD model enables to study the solar wind interaction with the planets, moons, asteroids and comets [2]. We also introduce web services which enable a connection of the HWA and observational data resources.

References:
[1] http://impex-fp7.oeaw.ac.at
[2] http://hwa.fmi.fi