Solar System Interest Group Session Summary

IVOA Interop, 8-12 May 2023

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- Thomas Boch provided a demo of HiPS applied to the surface of Mars.
 - HiPS does not have a way to indicate the direction of East.
 - The question of planetary reference frames has impact here.
 - The USGS Gazetteer of Planetary Nomenclature has no API.
- Stéphane Erard reported on VESPA progress.
 - Registry clean-up is ongoing
 - Need some sort of support for large increases in services perhaps a grouping mechanism?
 - VESPA queries all services in one shot, as opposed to presenting a list of services for selection.
 Natural language search options are being investigated but this requires much more detailed metadata.
 - MOC has been used more often than s_region for flyby and orbit imagery because of the large surface areas typically involved.

- Baptiste subbed-in for Steve Joy and In Sook Moon to update us on the PDS PPI (Planetary Plasma Interactions) VO services that "broke" VESPA.
 - The PPI data are still not listed because of the "many services" problem. This will be true for PDS generally.
- Jean-Christophe Malapert presented the current status of efforts to establish standards for applying coordinate reference frames.
 - The Open Geospatial Consortium has a Planetary Domain Working Group looking into extending OGC standards to bodies other than Earth, working with the IAU standard bodies to harmonize solutions.
 - Need a way to convey coordinate frame metadata (DOI metadata?) to users and applications.

- Angelo Zinzi reported on the development of NEO data and services at SSDC (NEOROCKS). When operational, the NEOSTEL telescope will survey the entire visible sky in 2-3 nights.
 - About 1/3 of the metadata parameters wanted were not present in EPNCore.
 - Phase curves and polarization curves don't really fit the "timeseries" model, but there is a dataproduct_type of "photometric function".
 - NEOROCKS will offer precovery services as well as a public observation planner.
 - SSDC is also the primary archive for the LICIACube mission data.

In Summary:

- New planetary services are being added.
- The planetary extensions are being exercised.
- More work is needed.
- And that's a good thing!