

Conference Sessions and Workshops

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Enabling Access to Solar and Planetary Resources through the Virtual Observatory (EPSC, Nantes, France, September 2015)

Abstract

The large amount of data generated by modern space missions calls for a change of organization of data distribution and access procedures. Although long term archives exist for telescopic and space-borne observations, high-level functions need to be developed on top of these repositories to make Solar and Planetary Science data more accessible and to favor interoperability. Results of simulations and reference laboratory data also need to be integrated to support and interpret the observations. The Virtual Observatory (VO) standards developed in Astronomy may be adapted in the field of Planetary Science to develop interoperability, including automated workflows to process related data from different sources. Other communities have developed their own standards (GIS for surfaces, SPASE for space plasma, PDS4 for planetary mission archives...) and an effort to make them interoperable is starting. The goals of the session are to provide an overview of progresses in the fields of the IVOA and other VO domains, ongoing data handling projects in Planetary Science, and use cases of VO, GIS and SPASE applications with a focus on science activities.

Conveners

- [Baptiste Cecconi](#) LESIA, Observatoire de Paris, France.
- [William Thuillot](#) , IMCCE, Observatoire de Paris, France.
- [Angelo Pio Rossi](#) , Jacobs University, Bremen, Germany.
- [M. Khodachenko](#), IWF, CEAW, Graz, Austria.
- [Maria Teresa Capria](#) , IAPS, INAF, Rome, Italy.
- [Tony Cook](#), Aberystwyth University, UK.

Details

- **Session MT9:** 5 oral presentations, 8 posters
 - [Oral Program](#)
 - [Poster Program](#)
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Enabling Access to Solar and Planetary Resources through the Virtual Observatory (AGU, San Francisco, California, USA, December 2015)

Abstract

Large amount of data are generated by modern space missions and ground based observatories calling for a change of organization of data distribution and access procedures. High-level tools are developed on top of archives of telescopic and space-borne observation repositories to make Heliophysics and Planetary Science data more accessible and favor interoperability. Simulations runs and reference laboratory data are also integrated to support and interpret observations. The Virtual Observatory standards developed in Astronomy can be adapted in the field of Planetary Science, including automated workflows to process related data from different sources. Other communities developed their own standards (GIS for planetary surfaces, SPASE and IUGONET for space physics, IPDA and PDS4 for planetary mission archives) and an effort to make them interoperable is ongoing. The goal of the session is to showcase interoperability progresses in Heliophysics and Planetary Science, including use cases and focussing on science activities.

Conveners

- [Baptiste Cecconi](#) , LESIA, Observatoire de Paris, France.
- [Daniel J. Crichton](#), JPL-NASA, Pasadena, California, USA.
- [Angelo Pio Rossi](#) , Jacobs University, Bremen, Germany.
- [D Aaron Roberts](#), GSFC-NASA, Greenbelt, Maryland, USA.

Details

- **Session IN33E/IN41A:** 7 oral presentations, 15 posters
 - [Oral Program](#)
 - [Poster Program](#)
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Open Research Data and Interoperable Science Infrastructures for Earth & Planetary Sciences (JpGU, Tokyo, Japan, May 2016)

Abstract

JpGU has been facilitating sessions related to data and information topics in past meetings, convened by groups/communities with interdisciplinary interests including scientific data centers, data systems, data sciences, and social network services. New dimensions and cross-disciplinary subjects are expected for further contribution to advancing the earth and planetary sciences. On the other hand, Open Data and Open Science are increasingly becoming hot topics, in parallel to establishing ICSU-WDS (2008), G8 Open Data Charter (2013), deployment of RDA (2013), and so forth.

New data and tools infrastructures are now emerging in Europe, Japan and in the United States aiming at improving the data availability in Solar (Virtual Solar Observatory), Earth (IUGONET, SPASE) and Planetary Sciences (NASA-PDS4, GIS technologies, Europlanet /VESPA...). Major space agencies are now investing in this technology, with the ultimate goal to dramatically enhance the science return of the shared data.

The JpGU community will be encouraged to discuss about our reaction, our contribution to the above data and information issues, and what future benefits and problems inherent in earth and planetary sciences will be.

Conveners

- **Yasuhiro Murayama**, Integrated Science Data System Research Laboratory, National Institute of Information and Communications Technology, Japan.
- **Baptiste Cecconi**, LESIA, Observatoire de Paris, France
- **Yasuhisa Kondo**, Research Institute for Humanity and Nature, Japan.
- **Reiichiro Ishii**, Japan Agency of Marine-Earth Science and Technology, Japan.
- **Daniel J Crichton**, JPL, NASA, Pasadena, California, USA.
- **Yukinobu Koyama**, Transdisciplinary Research Integration Center, Japan.

Details

- Session M-GI04: 11 oral presentations, 4 posters
 - [Oral Program](#)
 - [Poster Program](#)
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Planetary Science Interoperability (EPSC-DPS, Pasadena, California, USA, October 2016)

Abstract

The large amount of data generated by modern space missions calls for a change of organization of data distribution and access procedures. Although long term archives exist for telescopic and space-borne observations, high-level functions need to be developed on top of these repositories to make Planetary Science and Heliophysics data more accessible and to favor interoperability. Results of simulations and reference laboratory data also need to be integrated to support and interpret the observations. Interoperable software and interfaces has recently been developed in many scientific domains. The Virtual Observatory (VO) interoperable standards developed for Astronomy by the International Virtual Observatory Alliance (IVOA) can be adapted to Planetary Sciences, as demonstrated by the VESPA (Virtual European Solar and Planetary Access) team within the Europlanet-H2020-RI project. Other communities have developed their own standards: GIS (Geographic Information System) for Earth and planetary surfaces tools, SPASE (Space Physics Archive Search and Extract) for space plasma, PDS4 (NASA Planetary Data System, version 4) and IPDA (International Planetary Data Alliance) for planetary mission archives, etc, and an effort to make them interoperable altogether is starting, including automated workflows to process related data from different sources. The goal of this workshop is to discuss, strengthen and develop the interoperability in Planetary Sciences and Heliophysics interoperability frameworks.

Conveners

- [Baptiste Cecconi](#), LESIA, Observatoire de Paris, France.
- **Daniel J. Crichton**, JPL-NASA, Pasadena, California, USA.
- [Angelo Pio Rossi](#), Jacobs University, Bremen, Germany.
- [Stéphane Erard](#), LESIA, Observatoire de Paris, France.

Details

- Date: Sunday, October 16th, 2016
 - [Program](#)
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Enabling Open and Interoperable Access to Planetary Science and Heliophysics Databases and Tools (AGU, San Francisco, California, USA, December 2016)

Abstract

The large amount of data generated by modern space missions calls for new data distribution and access procedures. High-level functions need to be developed on top of Planetary Science and Heliophysics data repositories to make them more accessible and interoperable. Simulation run results and reference laboratory data also need to be integrated to support and interpret observations. The Virtual Observatory interoperable standards developed for Astronomy by the International Virtual Observatory Alliance (IVOA) can be adapted to Planetary Sciences, as demonstrated by the VESPA team (Virtual European Solar and Planetary Access) within the Europlanet-H2020-RI project. Other communities have also developed interoperable standards: GIS (Geographic Information System) for Earth and Planetary Surfaces, SPASE (Space Physics Archive Search and Extract) for space plasma, PDS4 (NASA Planetary Data System) and IPDA (International Planetary Data Alliance) for planetary mission archives, etc, and an effort to make them interoperable altogether is starting, including automated workflows.

Conveners

- [Baptiste Cecconi](#) , LESIA, Observatoire de Paris, France.
- [Daniel J. Crichton](#), JPL-NASA, Pasadena, California, USA.
- [Angelo Pio Rossi](#) , Jacobs University, Bremen, Germany.
- [D Aaron Roberts](#), GSFC-NASA, Greenbelt, Maryland, USA.

Details

TBD