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V.O. PARIS DATA CENTRE PORTAL

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Abstract. This is a presentation of the new VO-Paris Portal which provides a direct web access to data available in the Paris Obervatory and partners institutions, through VO Protocols. Our portal allows access to services over the data like image mosaicing, source extraction or astrometry evaluation.

1 Introduction

VO-Paris Data Centre http://vo-web.obspm.fr/ is a federation which was set up by Paris Observatory and partners (IPSL, IAP, CEA). The evolution towards a data centre was a key for the development of a data and services Portal. We present here a prototype of this portal based on protocols and formats of the Virtual Observatory http://voparis-srv.obspm.fr/portal/.

2 VO-Paris Data Centre Portal

VO-Paris promotes a large amount of data through the VO. To increase the visibility of all those resources and to provide useful access, we have developed a portal based on web 2.0 technologies. To access the portal, the end user needs only a browser (no third party application is required). This portal uses VO protocols to query images, spectra and tabular data. It provides a simple query form and allows to launch codes for computation over the available data. All the information associated to the various services comes directly from IVOA registries. All the data displayed on the screen are result of XSLT transformation of VOTable documents.

3 Data and services available through the Portal

3.1 Spectra

VO Access is already available for spectra databases: Fuse, HIG, Giraffe and BeSS (Be Stars Spectra) through SSA (Simple Spectral Access) protocol. HESS database will soon be available.

A client is also available for 3D Spectroscopy, compatible with Euro-3D format. Using the new VO standard PLASTIC, this client allows communication with Aladin and VOSpec which are used for spectrum visualization. Two databases already deliver this kind of spectra through SSA: Giraffe and Aspid.

3.2 Images

VOPSAT (Virtual Observatory Paris Southern ATlas) provides access to surveys ESO-R and SRCJ (B band) available through SIA using different modes. A special effort has been put on astrometric accuracy. The southern part of POSS-E will be soon accessible and DENIS will follow with all the available strips.

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Fig. 1. visualization of access and result interface

3.3 Tabular data

The Extrasolar Planets Encyclopaedia is the first catalogue providing access to exoplanet information using the VO Cone Search protocol. A TAP (Table Access Protocol) prototype is available for that database.

3.4 Solar system services

IMCCE allows VO access to ephemerids, databases of physicals parameters of the Solar System small bodies and comets. The SkyBot service is queryable from our portal.

3.5 Access to numerical simulations

Paris Observatory develops numerical simulation services using advantage of VO technologies and standards. About twenty researchers offer simulation codes and databases of theoretical results :
http://vo.obspm.fr/simulation/index.html.
These programs deal with : Physics and chemistry of interstellar medium, physics of active nucleus galaxies, MHD on solar wind, stellar population synthesis, 3D radiative transfer, numerical relativity... Our Services Portal can be extended to launch simulation codes through a user-friendly interface. Some simple functionalities can be added: session variables, access to VOSpace to store results ...

4 Portal of services

The available services dedicated to images are: SExtractor, image mosaicing (using SWarp) and Astrocheck (quality of astrometry). When a service is launched, calculation is submitted to the cluster via the batch queue. The use of the Grid is currently being studied.

5 Conclusion

This portal is an important tool to promote data and to allow online calculation. Thanks to web 2.0 technologies, all the added values services can be used directly via a web browser.

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