Tools and services from the French VO

F. Genova and the French VO teams

The French VO (Action Spécifique Observatoires Virtuels France), a joint action of INSU and CNES, coordinates French participation in the VO. It helps teams to uptake VO standards and methods, provides forums for discussion, and supports French participation in the international discussion of interoperability standards organized by the International Virtual Observatory Alliance.

The French VO (INSU) is a member of the IVOA and of Euro-VO, and coordinates the European Coordination Action Euro-VO Data Centre Alliance.

Most French astronomy laboratories are involved in the development of VO-oriented services and tools

Answers to the 2006 census of OV actions in France were received from all Observatories (Besançon, Bordeaux, Côte d'Azur, Lyon, Marseille-Provence, Midi–Pyrénées, Paris, Strasbourg), and GRAAL(Montpellier), IAP (Paris), IAS (Orsay)

A wide diversity of actions
- *Archives of observations/science-ready data*
- *Value-added data bases and services*
- *Tools (visualisation, image analysis, …)*
- *Standards*
- *Software suites*
- *Numerical simulations/theoretical astronomy services*
- *Thematic services*

Many projects at different scales, some of them operational, some in development or in project

A new frame for 'classical' services such as the CDS, CDPP, MEDOC, BASS 2000, IMCCE, TERAPIX

The usage of IVOA standards ensures interoperability with services and tools from the other VO projects

Added-value services

CDS (SIMBAD, VizieR, Aladin)

IMCCE (SkyBot, ephemeris and astrometry of Solar system objects)

Geodesy/Reference systems

Study of Planets (BDAP, comets,…)

Services and tools related to the analysis of spectral data: POLLUX, BASECOL/MOLAT (Atomic and Molecular data bases), CASSIS, DALIA, 'Radiative transfer'

Specific services: Exoplanets, Hyperleda, Besançon double star data base, Be stars, Small bodies of the outer Solar System, CFHTLS galaxy clusters

Theory/Modelling

Besançon model

'Numerical portal' of Paris Observatory (PDR code, Titan,…)

HORIZON data bases and services

Data/added-value data from

Nançay Radio Telescope, OHP

GIRAFFE, EROS, CAI Atlases, Fabry-Perot data, VIMOS

COROT, FUSE, Planck, XMM

BASS 2000, MEDOC (Sun)

CDPP, CIME-G (space plasma physics/ionosphere)

Software suites

TERAPIX and other image processing tools

JMMC (interferometry)

MIGALE

Among technical actions

Participation in the definition of IVOA standards

Workflow use cases

'Intelligent resource discovery'

Image processing

Usage of the computational GRID

Outreach

Participation to 'Hands on Universe'

In preparation: support documents for teaching

French VO Community site France-vo.org