

Astroinformatics

VO Tools Tutorial

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Tutorials

Practical hands-on session – connectivity !!!!

Java Webstart or standalone

Large work needs -Xmx64M or larger for java

You are querying whole world at once

In parallel - sometimes locks, not answers .

Compatibility of clients and servers - big challenge
a lot of strange errors

ASK questions in audience - demonstration
important

VO Basics

VOTable (Metadata - UCD, data FITS, ASCII..)

VO Registry – where, what, how - harvesting

Protocols (not theory)

Conesearch (search in circle with given radius)

SIA (transfer of image given dimension, resampling)

SSA (spectrum of target, pos., spec. range, time...)

TAP (new – query of multiple tables and services)

SLAP (atom. and molecular transitions, oscil. str.,)

ADQL – like SQL (query tables), TAP

UWS (REST) – VOSPACE, (CEA) WS, Grid

Practical Examples and Tutorials

EURO-VO Scientific Tutorials

<http://www.euro-vo.org/pub/fc/workflows.html>

VO Schools EURO-VO - 2009,2010,2011

<http://cds.u-strasbg.fr/twikiAIDA/bin/view/EuroVOAIDA/VOSchool09/WebHome>

<http://cds.u-strasbg.fr/twikiAIDA/bin/view/EuroVOAIDA/VOSchool10/WebHome>

<http://www.eurovo-ice.eu/twiki/bin/view/EuroVOICE/ICESchool>

AIDA WP5 pages - VO in Education and Outreach

<http://cds.u-strasbg.fr/twikiAIDA/bin/view/EuroVOAIDA/WP5WorkProgrammeUseCases>

Important NVO links

NVO portal – Entry point

<http://www.us-vo.org/>

Old NVO portal – still usefull

<http://www.us-vo.org/oldhome/>

NVO tutorials

<http://www.us-vo.org/help/tutorials.cfm>

NVO Book (free online ASP)

http://aspbooks.org/a/volumes/table_of_contents/?book_id=420

OpenSky Query (Brown Dwarf Example)

<http://openskyquery.net/Sky/SkySite/browse/Browse.aspx>

Simple Cross-match form (e.g. 2MASS x SDSS)

<http://openskyquery.net/Sky/skysite/OSQform/default.aspx>

Practical Issues

SPLAT the BEST !!!! for stellar spectroscopy not only VO visualize but analysis as well

VOSPEC - powerful but not suitable for optical spectroscopy

(but SED nice, automatic unit conversion, mathbox - ???,)

1D FITS not, complicated adding files, mirror to RV?, strict SSA

SpecView – crashes, fitting models (Kurucz, Dusty, HST calib)

SSA not obeyed well in servers – misused in COROT time series

Long spectra – huge memory, long load - no cutout yet

Most of VO spectral stuff is just data discovery and visualisation !

SSA services Ondrejov spectra

<http://ssaproxy.asu.cas.cz/heros/q/ssa/ssap.xml>

<http://ssaproxy.asu.cas.cz/heros/q/pssa/ssap.xml>

<http://ssaproxy.asu.cas.cz/ccd700/q/ssa/ssap.xml>

<http://ssaproxy.asu.cas.cz/ccd700/q/pssa/ssap.xml>

Not yet registered –access restriction needed for CCD700

Playing with SPLAT

POS acquired from Name resolver

TARGETNAME (vega, HD6226)

BAND (6550e-10/6570e-10)

FORMAT (applic/fits, votable...)

FLUXCALIB=normalized -now modus, autofit

TIME YYYY-MM-DD

DEMO

Zeta Tau in Halpha

Phi Per

Water lines on Eta Uma

V360 Lac - thick disk – messy profiles

Rho Aur – Binarity

Kap Dra - rising emission

96 Her - double absorption to single

del Sco – profile rising

Catch ! 28 Tau and 27 Tau in POS SIZE=10arcs

With TARGETNAME HR1847B

TOPCAT, ALADIN, SAMP

Pleiades POSS – J 6x6 deg

Hipparcos catalogue

matches(sptype, 'B'), hipmag

TAP service – GAVO – Hipparcos

Vodesktop....

Questions - more examples ?