



# Overview

Françoise Genova and the CDS team

13 November 2013

- Presented at the 2011 Scientific Council meeting and endorsed by the 2012 Evaluation Committee
- Three axes
  - Maintain the services at the highest possible level in terms of content and functionalities
  - Add functions to the core services in line with our expertise, the users' needs and R&D results
  - Take into account the change in scale of CDS activities due to the increase of publication volume and the advent of many large surveys
- Proposed addition: CDS is an actor of the evolution towards Open Data/Open Science

*“Open data” talk tomorrow*

# Strategic axes identified in 2011



- Linked to the evolution of astronomy
  - Accompany the very large survey era
  - Put our expertise at the service of Gaia usage by the community
  - Construction of Spectral Energy Distribution; data cubes and polarimetry
- Linked to technological evolution
  - Web 2.0/3.0 paradigm (user-centric; usage of semantic web, mobility and universality)
- VO aspects
  - Implementation in the CDS services, which are major building blocks of the VO
  - Continue to update the VO framework (standards and tools)
  - Disseminate VO knowledge in the astronomical community
  - Look for a framework to pursue outreach towards education
- Assess the role of CDS in the fast evolving landscape of scientific data curation

# Highlights : The CDS in the national landscape

- The CDS has been confirmed as “Research Infrastructure” in the 2012-2020 MESR Roadmap (Oct. 2012)



Sciences du système Terre et de l'Univers - Sciences de l'Univers

catégorie	nom de groupe	nom	nom complet
OI	ESO	ESO	European Southern Observatory
		ALMA	Atacama Large Millimeter/submillimeter Array, Observatoire mondial interférométrique millimétrique/submillimétrique
		ELT (Projet)	ESO/ Extremely Large Telescope - Plus grand télescope mondial en visible et infrarouge proche.
		VLT	Very Large Telescope (Interferometer) : Réseau de 4 télescopes optiques avec un mode interférométrique
TGIR	CFHT		Canada-France-Hawaii Telescope ; télescope optique et proche infrarouge à large champ de vue
TGIR	IRAM		Institut de RadioAstronomie Millimétrique / Extension du plateau de Bure (NOEMA, Northern Extended Millimeter Array)
IR	CDS		Centre de données astronomiques de Strasbourg
IR	HESS		High Energy Stereoscopic System ; réseau de télescopes Cherenkov en rayons gamma de très haute énergie
IR	LOFAR		LOw Frequency ARray, Radiotélescope métrique/décamétrique composé de 41 stations en réseau réparties en Europe
PROJET	CTA		Astrophysique des très hautes énergies. Projet de télescope suite des instruments HESS et HESS2

# Highlights: Participation in projects

- CDS is officially involved in Gaia Data Processing Archive Access Coordination Unit (CU9), selected in March 2013
- Five European projects
  - Collaborative and Sustainable Astronomical Data Infrastructure for Europe (CoSADIE), the current Euro-VO project, led by CDS
  - Three projects selected in SPACE Calls
    - Astronomical Resource cross-matching for High Energy Studies (ARCHEs), led by the High Energy Astrophysics team of the Observatory
    - Unveiling the power of the deepest images of the Universe (AstroDeep)
    - The Milky Way as a star formation engine (VIALACTEA)
  - International Collaboration on Research Data Infrastructure (iCORDI), which is now RDA Europe

*“Projects” talk this afternoon*

# Highlights: Services



- SIMBAD can sort references attached to objects by “relevance” (where the object is cited in the text) – Release September 2013
- *Aladin lite*, Aladin running in your web browser – Release May 2013
- Implementation of the CDS services in the VO framework:  
*TAPVizieR* released January 2013 (TAP: Table Access Protocol)  
370 000 columns, huge data heterogeneity
- *VizieR Photometry Viewer* – release October 2013  
A first step, with Aladin lite, towards customizable web pages
- Efficient pipeline for survey catalogues and images
  - Planck maps in Aladin - March 2013
  - Participation in the data release of the final version of the CFHT Legacy Survey – October 2012

# SIMBAD sorts references by relevance

**References (101 between 1850 and 2014)**  
Simbad bibliographic survey began in 1950 for stars (at least bright stars) and in 1983 for all other objects (outside the solar system).

**Sort by date**

Sort reference summaries

Date Title|Abstract|Keyword

send the bibcodes to ADS

**2013ApJ...777L...1F** [x d ,2]  
Astrophys. J., 777, L1 (2013)  
**The open cluster chemical analysis and mapping survey: local galactic metallicity gradient with APFRINCHABOY P.M., THOMPSON B., JACKSON K.M., BEERS T.C., BIZYAEV D., BREWINGTON H., CUNH, MALANUSHENKO V., MARCHANTE M., MESZAROS S., SNEDDEN S., SMITH V.V. and WILSON J.C.**

**Comments & notes:**  
flags: (abstract)

**2012RMxAA..48..41B** [x ,1]  
Rev. Mex. Astron. Astrofis., 48, 41-46 (2012)  
**Radio continuum observations of LMC SNR J1**  
BOZZETTO L.M., FILIPOVIC M.D., CRAWFORD E.J.

**2011ARep...55..473D** [x d ,2]  
Astron. Rep., 55, 473-486 (2011)  
**On the dynamics of open clusters.**  
DANILOV V.M.

**Comments & notes:**  
notes: 2011AZh....88..515D

**2011AstL...37..248K**  
Astron. Lett., 37, 248-253 (2011)  
**Dynamics of double open clusters in the galaxy.**  
KÓRKOV A.V. and ORLOV V.V.

**Comments & notes:**  
notes: 2011PAZh...37..274K

**2011JHA....42..177H**  
J. History of Astronomy, 42, 177-192 (2011)  
**William Herschel and the nebulae, part 1: 1770-1786.**  
HOSKIN M.

**References of M 38 = NGC 1912**

**References (101 between 1850 and 2014)**  
Simbad bibliographic survey began in 1950 for stars (at least bright stars) and in 1983 for all other objects (outside the solar system).

**Sort by title, abstract, keyword**

Sort reference summaries by : (not exhaustive, explanation here)

Date Title|Abstract|Keyword In table

send the bibcodes to ADS

**2007PASJ...59..547P** (in title, abstract, keyword, subtitle)  
Publ. Astron. Soc. Jap., 59, 547-558 (2007)  
**Stellar contents of two intermediate age clusters: NGC 1**  
PANDEY A.K., SHARMA S., UPADHYAY K., OGURA K., SANDHU T.

**Comments & notes:**  
flags: (abstract)

**2005BASI...33..379P** (in title) [t ]  
Bull. Astron. Soc. India, 33, 379 (2005)  
**Wide field CCD photometry around open cluster NGC 1912.**  
PANDEY A.K., UPADHYAY K., OGURA K., MITO H. and SAGAR R.

**2004AAS...205.2217D** (in title) [t ]  
American Astron. Soc. meeting, 205, #22.17 (2004)  
**WIYN open cluster study MOSAIC photometry of M 38.**  
DENMARK D.J., SARAJEDINI A., DELIYANNIS C.P., CUMMINGS J.

**Comments & notes:**  
CDS status: being processed

**2002A&A...390..103D** (in title) [t ]  
Astron. Astrophys., 390, 103-108 (2002)  
**NGC 1912 and NGC 1907: A close encounter between open clusters.**  
DE OLIVEIRA M.R., FAUSTI A., BICA E. and DOTTORI H.

**Comments & notes:**  
flags: (abstract)

**1999AJ....117..937S** (in title, keyword) [t k ]  
Astron. J., 117, 937-961 (1999)  
**Multicolor CCD photometry and stellar evolutionary analysis using magnitude diagrams.**  
SUBRAMANIAM A. and SAGAR R.

**Comments & notes:**  
flags: (abstract)  
dic: Table 4: <CI\* NGC 1912 SuSa NN> N=15 among (Nos 1-10)

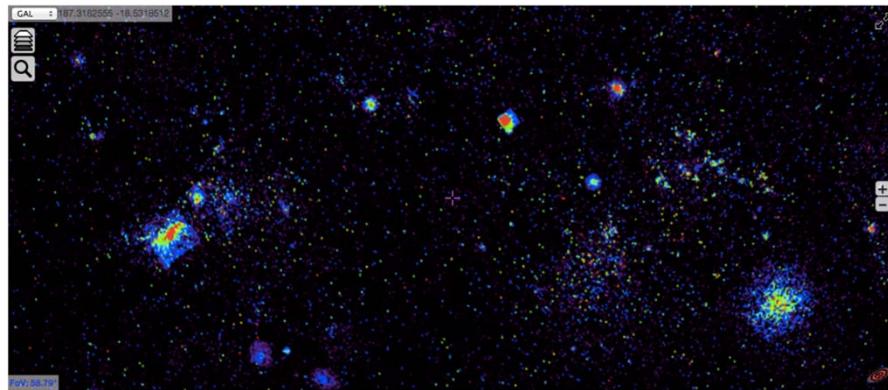
**2010MNRAS.407.2109P** (in table) [d ,1]  
Mon. Not. R. Astron. Soc., 407, 2109-2121 (2010)  
**A kinematic study of open clusters: implications for their origin.**  
PUTTE D.V., GARNIER T.P., FERRERAS I., MIGNANI R.P. and CROPPER M.

**Comments & notes:**  
flags: (abstract)  
files: <Available at CDS: table1.dat table2.dat table4.dat>

**2009A&A...495..807K** (in table) [d ,1]  
Astron. Astrophys., 495, 807-818 (2009)  
**Shape parameters of galactic open clusters.**  
KHARENKO N.V., BERCKZIK P., PETROV M.I., PISKUNOV A.E., ROESER S., SCHILBACH E. and SCHOLZ R.-D.

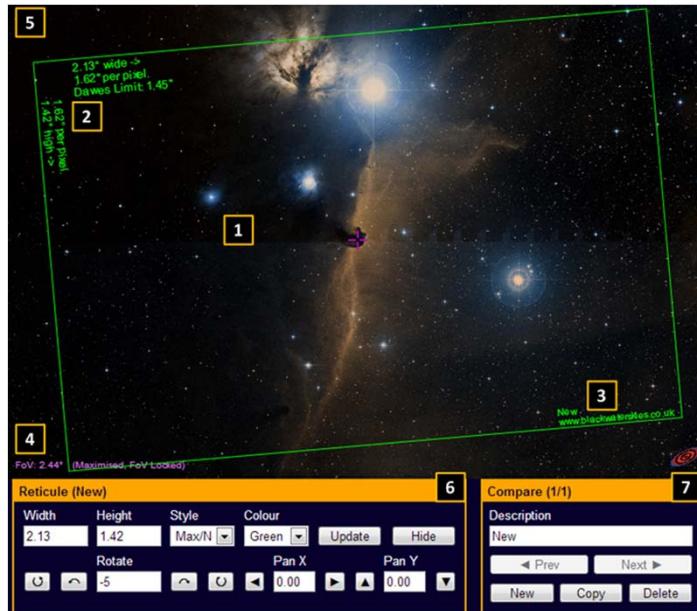
**Comments & notes:**  
flags: (abstract)  
files: <Available at CDS: table.dat>

# Aladin Lite

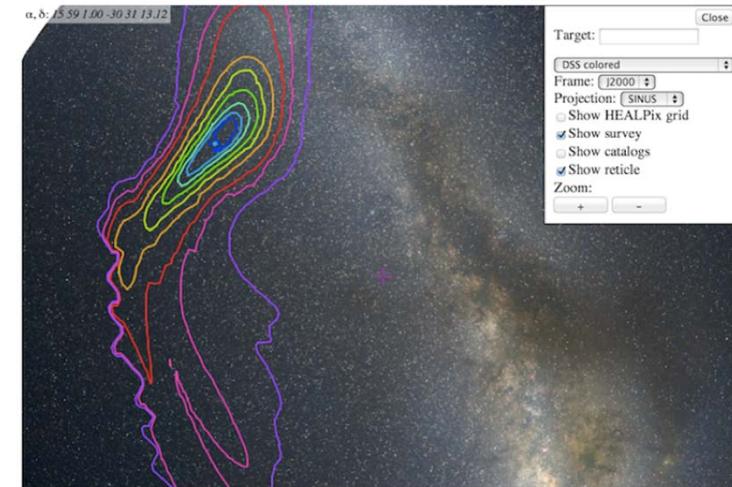


ADS All Sky Survey

Imaging Toolbox (amateur astronomer)



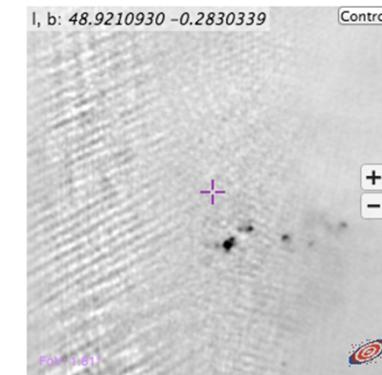
LIGO  
Skymap for G43582



Atomic Hydrogen

Map:  
[http://cade.irap.omp.eu/documents/Ancillary/VCPS/VGPS\\_1\\_8192.fits](http://cade.irap.omp.eu/documents/Ancillary/VCPS/VGPS_1_8192.fits)

Weight:  
[http://cade.irap.omp.eu/documents/Ancillary/VCPS/VGPS\\_1\\_8192\\_weight.fits](http://cade.irap.omp.eu/documents/Ancillary/VCPS/VGPS_1_8192_weight.fits)



VGPS/CADE (IRAP)

# Aladin Lite in SIMBAD (in test)

## Basic data :

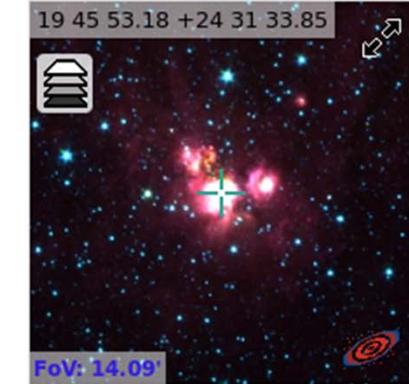
**SH 2-87** -- HII (ionized) region

query around  with radius  arcmin

Other object types:

[Rad](#) (B2, BWE, F3R, GB6, 87GB, GRS, MITG, NVSS, WSRTGP, [CPA2002], [TGC96]) , [HII](#) (LBN, SH) ,  
[IR](#) (IRAS, RAFGL) , [ISM](#) ([TP72])

Interactive [AladinLite](#)



**ICRS** coord. (ep=J2000) :

19 46 20.90 +24 35 14.0 ( ~ ) [ 600 600 175 ] D [1998AJ....115.1693C](#)

**Gal** coord. (ep=J2000) :

060.8820 -00.1332 ( ~ ) [ 600 600 0 ] D [1998AJ....115.1693C](#)

Radial velocity / Redshift / cz : **v(km/s)** 21.7 [~] / **z(~)** 0.000072 [~] / **cz** 21.70 [~] ( ~ ) D [1996A&AS..115...81B](#)

## Identifiers (18) :

[LBN](#) 060.95-00.03

[87GB](#) 194413.6+242748

[MITG](#) J194621+2435

[CPA2002] 6

[B2](#).2 1944+24

[GRS](#) G060.90 -00.10

[NVSS](#) J194620+243514

[TGC96] 1944+2427

[BWE](#) 1944+2427

[IRAS](#) 19442+2427

[RAFGL](#) 2454

[TP72] 65

[F3R](#) 2108

[LBN](#) 136

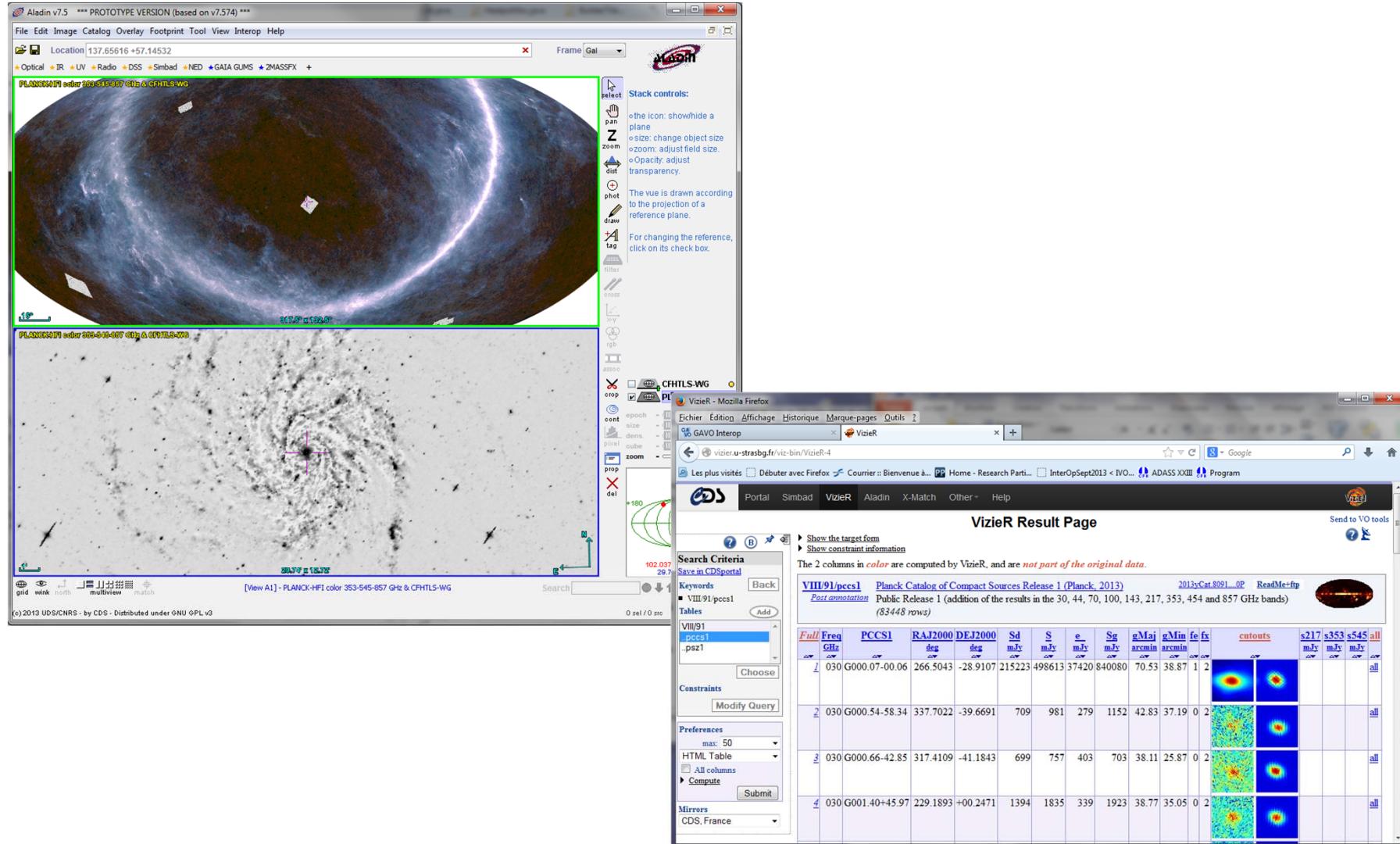
[SH](#) 2-87

[GB6](#) B1944+2427

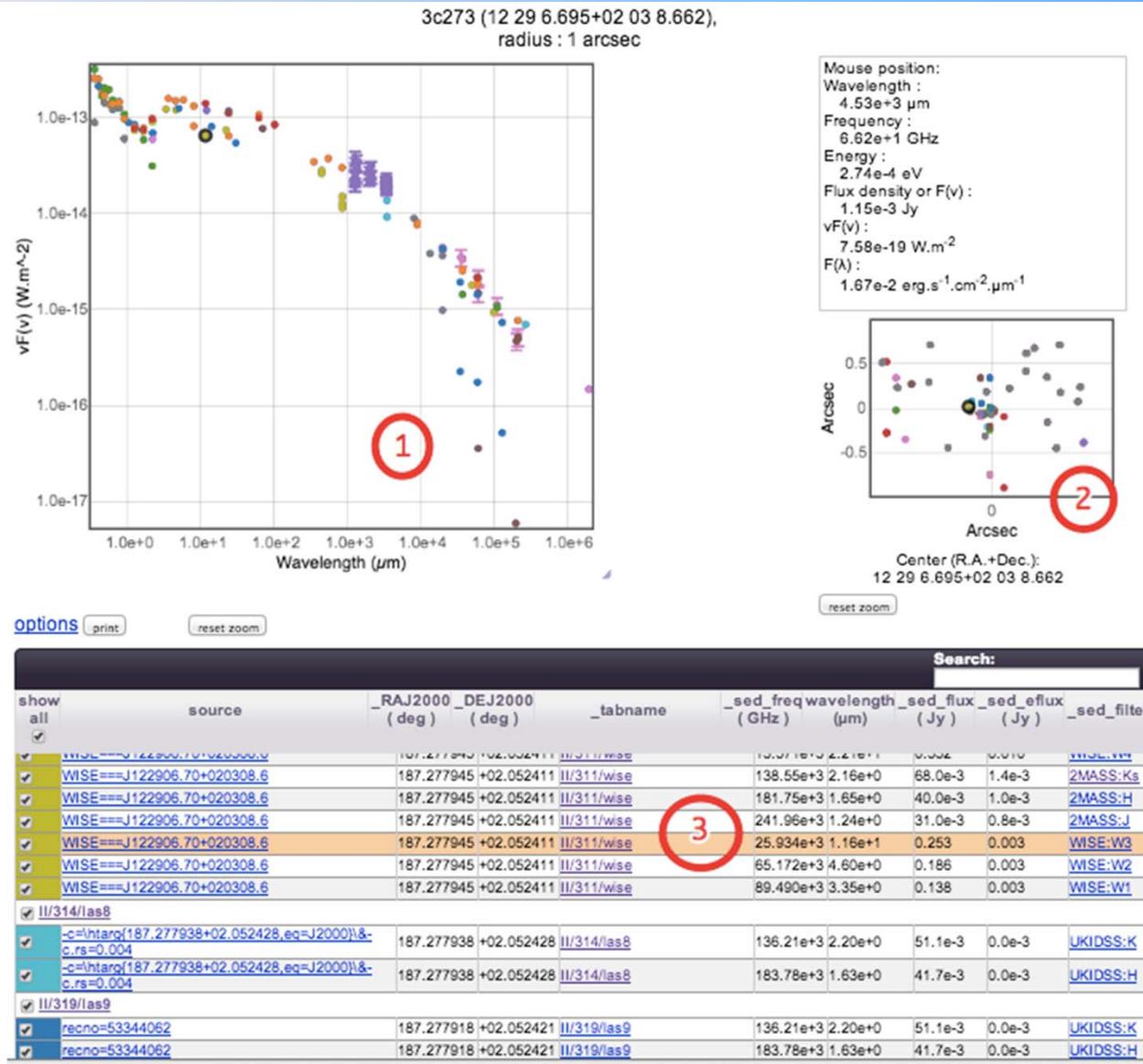
[MITG](#) J194623+2435

[WSRTGP](#) 1944+2427

# Planck and CFHTLS at CDS



# VizieR Photometry Viewer



# Highlights: CDS



- Action to improve reliability
  - Systematic analysis of all relevant elements
  - Assessment of the Data Seal of Approval label – our main aim is to provide data which can be reused, rather than data preservation, and we have to change the point of view to work on DSA criteria. DSA is recognized by EC.
  - CDS is a member of the World Data System, which means that it has been evaluated as trustable (“light” technical evaluation and evaluation of the scientific relevance, well adapted to “data services”, not only to “data repositories”)
- Actions to improve our tools, our procedures, and our expertise
  - Upgrade of the collaborative spaces
  - Re-organisation of the “documentalistes” shared documentation
  - Continuation of the “Infusion” meetings – knowledge exchange between computer engineers, astronomers, trainees (CDS and the other Observatory engineers)
  - Many intern trainings, most of them on research or R&D topics

*R&D talk this afternoon*

# Service supervision

Firefox ▾

Home | Data Seal of Approval × http://aladin.u-str...st/GluSupervisor.pl × +

 Portal Simbad VizieR Aladin X-Match Other Help

## Glu Supervisor

Date du dernier test complet : 19-Mar-2013 09:34

ACDS/XMM	Aladin	Bazaar etc...	Biblio CDS
CDS http servers	Climatisation	Clones locaux	Dictionary of nom.
GLU	Portail CDS	Sesame	Simbad
Simplay	VizieR	WebService	XMatch

Relancer un test global manuellement =>

 Tout roule  
 Panne récente

 Tests non effectués  
 Panne mineure  
 Panne majeure

Pour quelques explications techniques, cliquer [ici](#)

© IIDS/CNRS



# Data Seal of approval : trusted repositories



The screenshot shows the Data Seal of Approval website interface. At the top, there's a banner with a red wax seal icon containing the text "Data Seal of Approval". Below the banner, the header includes links for Home, Assessment, Community, News & Events, and TOOL LOG IN. A sub-header below the main menu says "peer review process is free of charge." The "News & Events" section lists five items with icons:

- Expired certificate warning on the On-line Assessment Tool »
- DSA conference 2013 great success »
- Data Seal of Approval to be translated into Czech »
- DSA Guidelines for 2014-2015 now available »
- Data Seal of Approval conference 2013, Ann Arbor, MI, USA 8 October »

The "Seals Acquired Around the World" section features a world map with red location pins. A note at the bottom of this section says "Visit the [Assessment page](#) to view a complete list of the seals." The footer of the page indicates it was viewed in Firefox.

# ICSU World Data System: trusted data centres and data services



The screenshot shows a Mozilla Firefox browser window displaying the ICSU World Data System website at [icsu-wds.org](http://icsu-wds.org). The page features a header with navigation links for Home, Organization, Our Members, Services, Publications, and Working Groups, along with a search bar. A prominent quote from the SCID Report 2008 is displayed, followed by the ICSU World Data System logo. Below the logo, there's a news item about a Polar Data Activities forum and a sidebar for latest blog entries.

**“** The WDS supports ICSU's mission and objectives, ensuring the long-term stewardship and provision of quality-assessed data and data services to the international science community and other stakeholders. **”**

SCID Report 2008

**ICSU WORLD DATA SYSTEM**

**International Forum**  
**Polar Data Activities**  
**in Global Data Systems**  
15-16 October 2013

**A Different Kind of Ecosystem**

The following article was written by WDS-SC member Wim Hugo—Chief Data and Information Officer, South African Environmental Observation Network ([SAEON](#))—in the October edition of the SAEON newsletter. This piece outlines SAEON's 'data manifesto', emphasizing the ethos on which this is founded and the efforts of ICSU-WDS in the field of global scientific data management.

- [A different kind of ecosystem](#)

**Latest Blog Entries**

- ◆ The Rise of Open Access ([More](#))
- ◆ New Visions for Citizen Science ([More](#))
- ◆ Nature to Launch 'Scientific Data' Journal ([More](#))
- ◆ Response to Science Magazine Open Access Publishing Hoax ([More](#))
- ◆ University of California's Academic Senate Approves Open Access

# The “documentalistes” collaborative space

The screenshot shows a web-based interface for a collaborative space. At the top, there is a banner with a sunset over a bridge (Golden Gate Bridge) and the text "Espace documentalistes". Below the banner, there are several sections arranged in a grid:

- Equipe Biblio**:
  - Organigramme (Sept. 2012) et organisation (qui indexe quoi, domaines de compétences)
  - Status et suivis des MAJ (SIMBAD/VizieR/Dic)
  - Réunions biblio => points importants
- SIMBAD (mise à jour) ->**:
  - Manuel des commandes de mise à jour
  - Manuel détaillé du bibliographe
  - Autres points abordés dans cette section : les problèmes d'identification et les réunions qui abordent la MAJ SIMBAD
- RACCORD**:
  - Manuel de Raccord
  - Trucs/bon à savoir sur les commandes et options
  - Projet du nouveau Raccord : Projet NIDS
- DJIN**:
  - Manuel de DJIN
  - Réunions
- VizieR**:
  - Description du ReadMe pour les utilisateurs
  - Procédures de MAJ FTP/VizieR
    - Documentation d'ingestion par François
    - Procédure
    - Les commandes et exemples
    - Recherche UCD1 de VizieR : UCDs
    - Les unités dans VizieR
  - Formats et fichiers particuliers
    - Les fichiers FITS
  - Réunions
- Dictionnaire**:
  - Procédure
  - Quelques points sur l'identification des objets
- Astrophysique**:
  - Cours astro (1 et 2) de Caroline
  - Eclaircissements sur certains points :
    - étoiles doubles,
    - Lentilles (schéma)
    - Champs profonds
    - Les types spectraux dans Simbad
    - Qualités des z/RV/cz dans Simbad
    - Instruments/missions : qualités et λ, précisions cross-id Simbad
- Informatique**:
  - Outils du cdspack
  - Aladin (tutoriels)
  - TOPCAT
  - Formation interne à Linux
  - Exemples de requêtes SQL dans SIMBAD : SQL
  - Manipulation de fichiers de données avec grep, awk et sed ou l'éditeur VI
  - ...
- Liens utiles**:
  - Par type d'objet :
    - Etoiles
    - Variable stars
    - SNe
    - GRBs
    - etc.
  - Archives de missions
  - Convertisseurs
  - Astronomie vulgarisée

# The “Infusion” meetings

The figure consists of three side-by-side screenshots of Mozilla Firefox browser windows, each displaying a different Infusion meeting announcement page.

- Left Window:** Shows the main "Announces de réunion" page for Infusion. It features a logo with a magnifying glass over a red liquid, the word "Infusion", and a navigation menu. Below the menu, a list of past meetings is provided:
  - Infusion XIV - 5 octobre 2012** (mardi 2 octobre 2012, par Thomas)
  - Infusion XIII - 29 juin 2012** (11 juin 2012, par Thomas)
  - Infusion XII - 11 mai 2012** (24 avril 2012, par Thomas)
  - Infusion XI - 16 mars 2012** (9 février 2012, par Thomas)
  - Infusion X - 3 février 2012** (20 janvier 2012, par Thomas)
  - Réunion Infusion IX - vendredi 9 décembre 2011** (25 novembre 2011, par Thomas)
- Middle Window:** Displays the "Infusion XIV - 5 octobre 2012" meeting page. It includes the Infusion logo, a navigation menu, and the title "Infusion XIV - 5 octobre 2012" (mardi 2 octobre 2012, par Thomas). Below the title, it states: "Le programme de la réunion Infusion du 5 octobre 2012 est le suivant :". A bulleted list follows:
  - Laurent Michel: **Des projets ? Pour quoi faire !**. Retour sur la formation INSU consacrée à la Spécification.
  - André Schaaff: **Wakanda, framework intégré de développement Javascript**
- Right Window:** Shows the "Infusion XIII - 29 juin 2012" meeting page. It has the Infusion logo, navigation menu, and the title "Infusion XIII - 29 juin 2012" (lundi 11 juin 2012, par Thomas). It notes: "La réunion infusion n°13 se tiendra vendredi 29 juin 2012, avec le programme suivant :". Another bulleted list is provided:
  - *Compte-rendu de la conférence PostgreSQL, PG Day France*, par Gilles Landais
  - *Nouveautés de Java 7 (et Java 8)*, par Thomas Boch

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## STATUS OF SC 2012 RECOMMENDATIONS

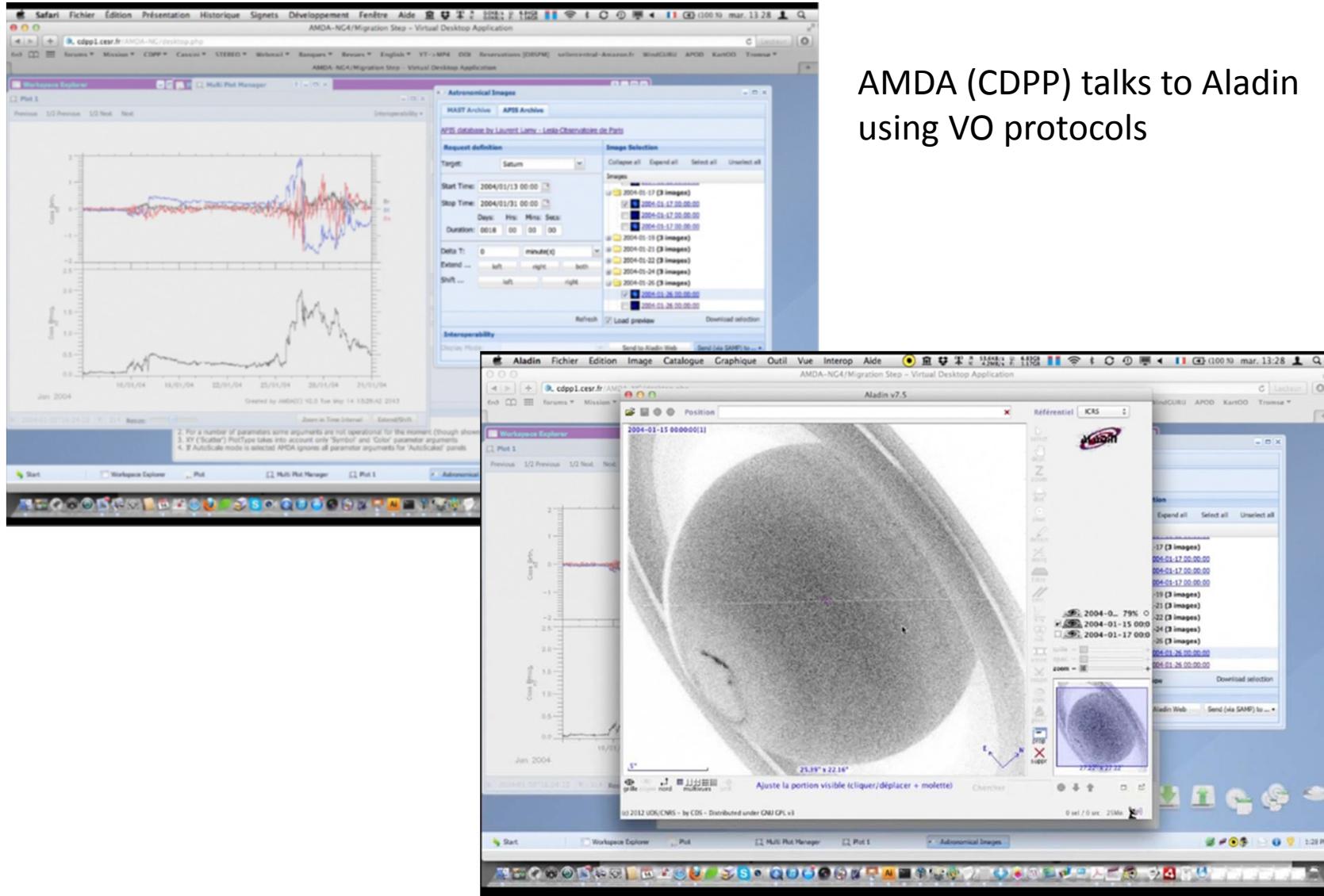
- 
- A very rich, deep analysis of all the aspects of our activities
  - The recommendations are kept in mind and used as guidelines, even if they are not all implemented yet
  - A detailed assessment is given in the yearly report. A selection of topics is presented here but all are of course open for questions.

# High level recommendations (1)

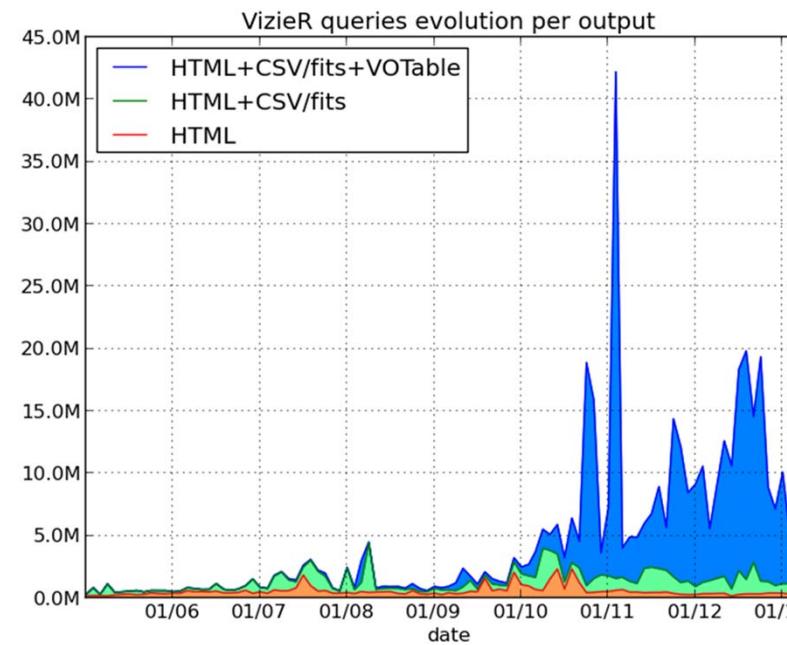


- “Services should be maintained at the highest level and upgraded periodically through research and development”  
*Service and R&D talk*
- “It would be beneficial to collaborate with organisations which generate large volumes of data”
  - Collaboration with ESA, including participation in Gaia and usage of Aladin
  - Discussions with ESO on dissemination of the Public Surveys
  - Collaboration with ADS (ADS All Sky Survey)  
*Demo*
  - Positive discussions with LOFAR and the Australians involved in preparation of SKA
  - Usage of Aladin by the planetary/space science community
- Role in the VO
  - Documents sent
  - Euro-VO: CoSADIE School and Data Centre Forum, close collaboration with Astronet
  - M. Allen organised Heidelberg Focus Sessions
  - Dissemination towards the national high energy astrophysics community (IN2P3)  
*Services, R&D and “Open data” talk*

# Saturn auroras in Aladin



- The VO is fully operational but since it works it is hidden from the users, even when they use it routinely
- Advanced functionalities (multi-D data, time series) are being developed
- Future projects such as SKA or LSST planning to be VO compliant



# Heidelberg IVOA Focus sessions



The screenshot shows two Mozilla Firefox windows displaying the IVOA Interop May 2013 schedule on a wiki.

**Top Window (Tuesday May 14 2013):**

Time	Type	Session Name	Chair/Moderator
09:00–09:10	gHS	Focus session on multi-dimensional data - Mark Allen (Session Chair)	
09:10–09:30	gHS	CyberSKA (pdf)	Russ Taylor
09:30–09:50	gHS	ALMA, JVLA, VLBA (pdf)	Brian Glendenning
09:50–10:10	gHS	CALIFA (pdf)	Mariya Lyubenova
10:10–10:30	gHS	MUSE (pdf)	Thomas Martinsson
<b>10:30–11:00 Break</b>			
11:00–12:30	gHS	Focus session on multi-dimensional data - Joseph Lazio (Moderator)	
Panel Discussion			
Panel:			
Severin Gaudet (TCG)			
Ray Norris (ASKAP) (pdf)			
Felix Stoehr (ALMA) (pdf)			
Michael Wise (ASTRON) (pdf)			
Frederic Paletou (Polarization) (pdf)			
Arnold Rots (X-ray) (pdf)			
Pat Dowler (DAL WG)			
Omar Laurino (DM WG)			

**Bottom Window (Wednesday May 15 2013):**

Time	Type	Session Name	Chair/Moderator
09:00–09:10	gHS	Focus session on time domain astronomy - Introduction (pdf)	Enrique Solano (Session Chair)
09:10–09:30	gHS	CoRoT, Kepler time series (pdf)	Jonas Debosscher
09:30–09:50	gHS	Designs and Requirements for Time Domain Data in LSST (pdf)	Mario Juric (LSST)
09:50–10:10	gHS	ASKAP/VAST (pdf)	Paul Hancock
10:10–10:30	gHS	LOFAR Transients and MeerKAT "ThunderKAT" transients (pdf)	John Swinbank
<b>10:30–11:00 Break</b>			
11:00–12:30	gHS	Focus session on time domain astronomy - Panel Discussion	Mark Allen (Moderator)
Panel:			
Severin Gaudet (TCG)			
Enrique Solano			
Mario Juric (LSST)			
Matthew Graham (TD IG, CRTS)			
Pat Dowler (DAL WG)			
Jesus Salgado (DM WG)			

# VO tutorial for the high energy community



## Multi-instrument, multi-wavelength study of high energy sources with the Virtual Observatory

Caroline Bot<sup>1,2</sup>, François Bonnarel<sup>1,2</sup>, René Goosmann<sup>2</sup> and Françoise Genova<sup>1,2</sup>

1: Centre de Données astronomiques de Strasbourg, France

2: Observatoire astronomique de Strasbourg, France

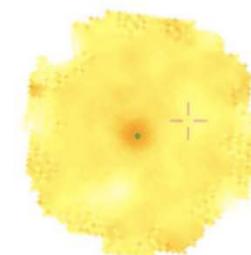
### Goal of this tutorial

This tutorial demonstrates how to data mining and multiple wavelength towards applications in the gamma data from other wavebands. The user:

- query astronomical catalogues
- use OV tools
- cross-correlate catalogues
- apply selection criteria
- use the observational measures
- visualize astronomical images
- display spectral energy distribution



Figure 21: left: how to load the SCUBA 850μm image from the Allsky menu  
right: SCUBA 850μm image of PKS 2155-304



## PKS 2155-304 – BL Lac object observed by HESS and FERMI

Load the VOTable file containing the HESS sources from Simbad (go back to the server selector and use the File tab - ). These sources get overlaid on the FERMI allsky survey.

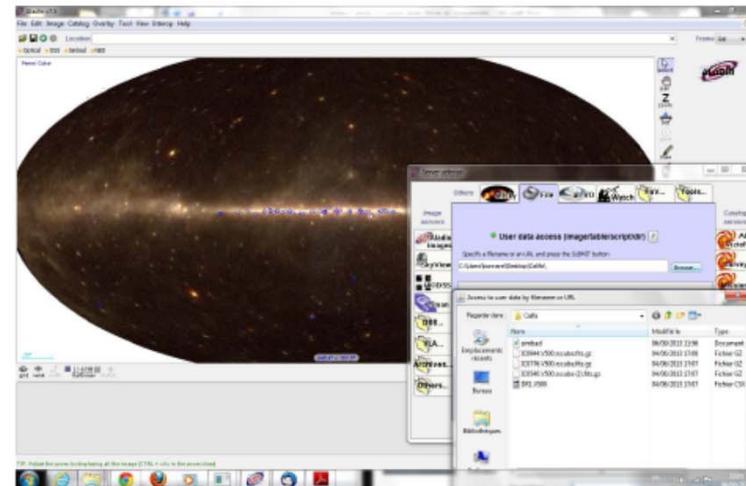


Figure 6: overlay of the HESS sources from Simbad on the FERMI color allsky image

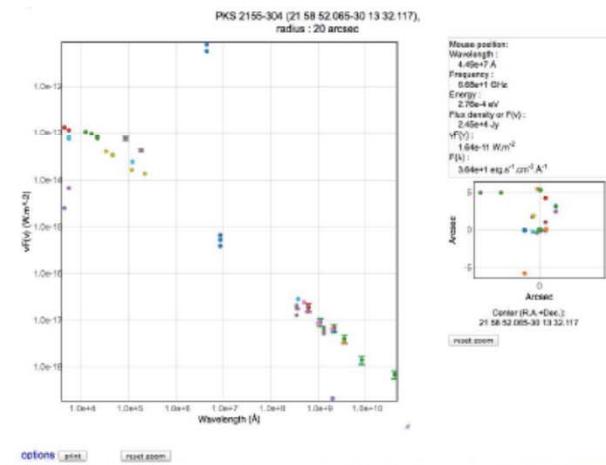


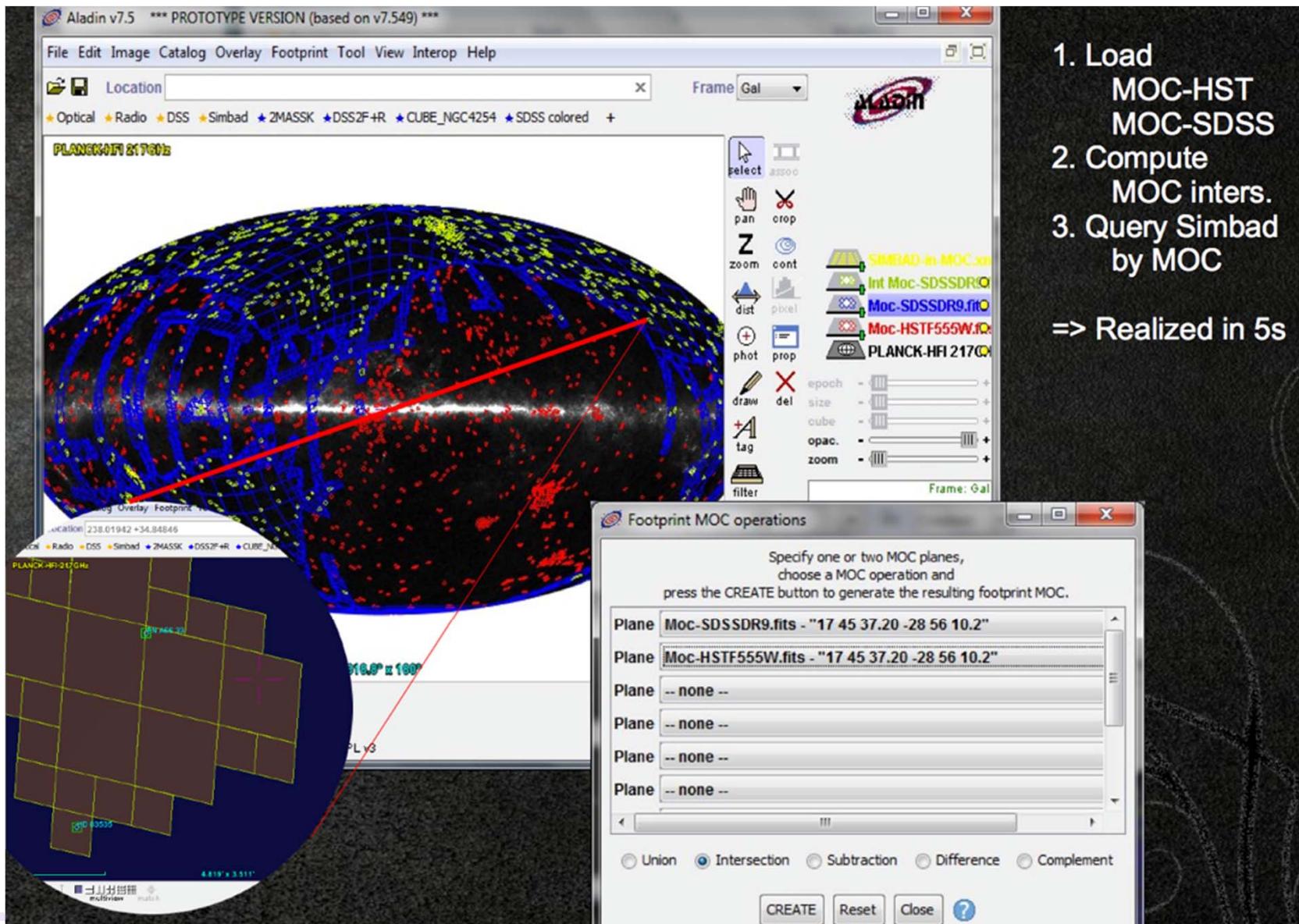
Figure 25: display of the photometric data points from VizieR catalogues found for PKS 2155-304

Coming soon...



« Please give me all SIMBAD objects  
observed by HST F555W and SDSS DR9 »

# Coming soon: Multi-Order Coverage



# High level recommendations (2)



- Scientific activities

- Two PhDs
  - Participation in projects

*Science & Projects talks*

- Visiting Scientist programme

The recommendation is taken very seriously and was part of the profile for a new “astronomers” position. No recruitment in 2013 but the profile will remain.

- Staffing

The situation is critical: F. Ochsenbein on Emeritus status, retirement of G. Chassagnard (IAP), and no recruitment. Two more critical retirements in 2014: M. Wenger, Ch. Bruneau

- Outreach

- Local activity towards secondary school teachers
  - European/international aspects: led by INAF in IVOA and CoSADIE

- Future directions

*Will be discussed throughout the meeting*

- Routinely used by astronomers in their daily work
- Collaboration with journals, observatory archives, VO teams
- CDS long term expertise recognized beyond astronomy and the national borders
  - Participation in EC High Level Expert Group on Scientific Data (2010-2012), the Research Data Alliance, RDA-Europe
  - Chargée de mission INSU, VP Huma-Num Scientific Council, invited participation in INRA Open Access to data meeting, invited participation in FREDOC 2013, etc.

*“CDS/Open data” talk*

<http://cdsweb.u-strasbg.fr/~boch/24-hours-queries/>