



CENTRO DE ASTROBIOLOGÍA
ASOCIADO AL NASA ASTROBIOLOGY INSTITUTE



CSIC



IVOA @ Spanish VO

J. Manuel Alacid, Enrique Solano, Carlos Rodrigo



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1. A bit of history: CAB

- Centro de Astrobiología (CAB, INTA-CSIC) hosts the largest Spanish astronomical data centre and has a large experience in the development and exploitation of astronomical archives.
- Our first archive-related activities started in 1998 with INES, the archive and distribution system of the IUE satellite.
- 18 archives presently managed at CAB (GTC, Calar Alto, ALHAMBRA,...)



- Calar Alto
- DUNES
- GASPS
- GTC
- OMC
- X-exoplanets
- CMC-15
- Mark-I
- SVO Moving Object Catalogue
- COROT
- DSS-63
- GAUDI
- INES
- Stars with Debris and Planets (not yet available)
- ALHAMBRA
- Joan Oró
- REECL-SQM
- The SVO hot subdwarf archive



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1. A bit of history: SVO

<http://svo.cab.inta-csic.es>

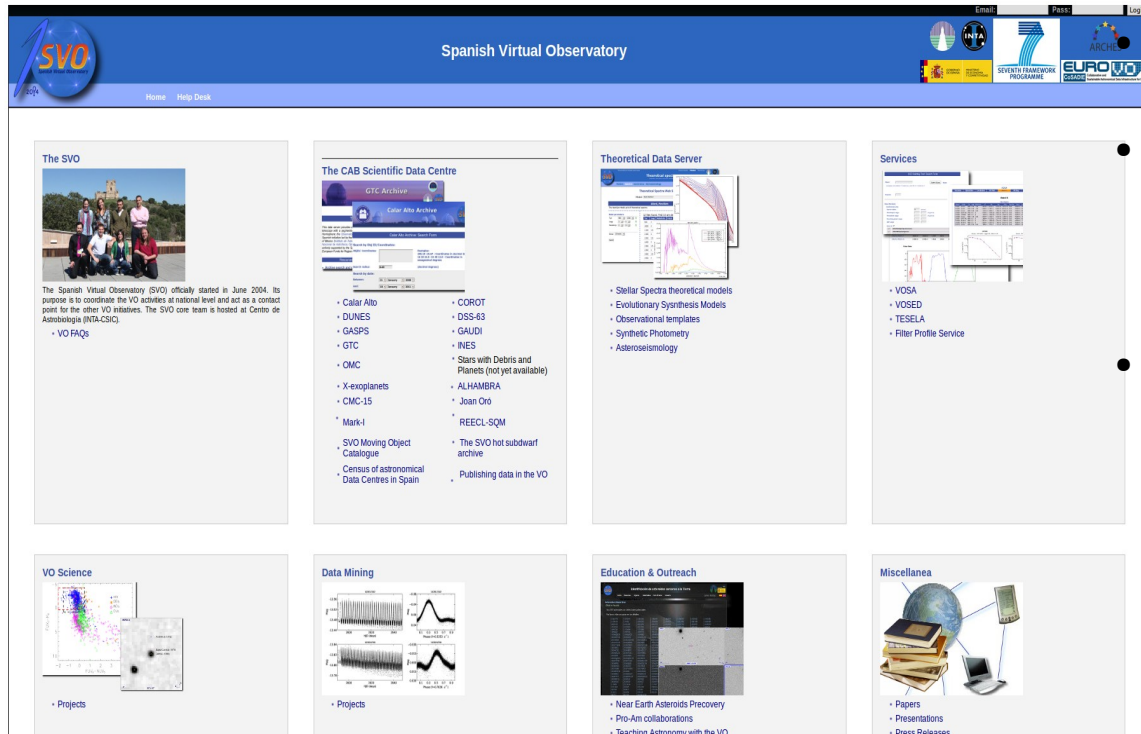
- The Spanish Virtual Observatory (SVO) is hosted at Centro de Astrobiología.

SVO officially joined IVOA in June 2004.

- Funded by regional, national and European (FP6, FP7, H2020) programmes.

Goals:

- Coordinations the VO activities at national level.
- National contact point for the other VO initiatives.



J. Manuel Alacid

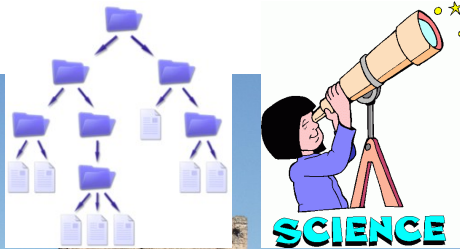




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1. The SVO team



- Not a large group (six FTEs)
- Major strengths:
 - Multidisciplinary
 - Complementarity



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2. VO standards implemented at CAB

- 7 SSAP: Corot, IUE, Gaudi, OMC, Arches...
- 3 SIAP: GTC, CAHA, Alhambra.
- 8 ConeSearch: Spitzer, Ask, Tesela, CMC15...
- 39 SSAP for collections of theoretical spectra.(BTSettl, Kurucz,...)
- 36 SSAP for synthetic photometry of theoretical models for 3165 filters.



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  <PARAM name="Publisher" utype="Curation.Publisher" ucd="meta.organization;meta.curation" value="Data Archive Unit / Center of Ast" datatype="char" arraysize="*" />
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  </DESCRIPTION>

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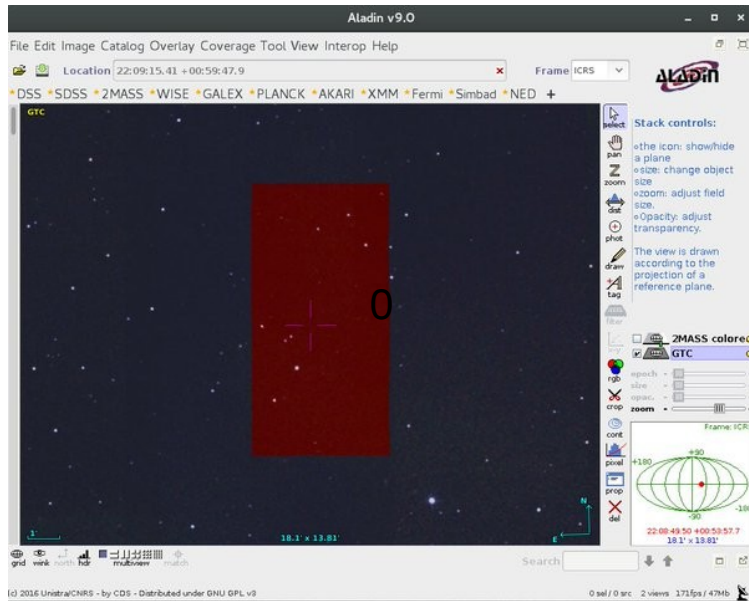


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2. VO standards implemented at CAB

HIPS (GTC)

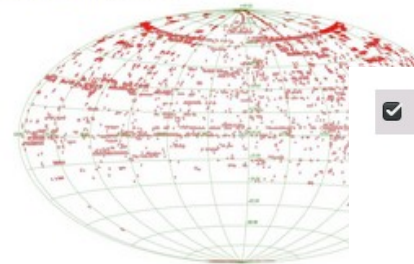


MOC

Large number of MOCs:

- GTC, CAHA, catalogues.
- Extinction maps.

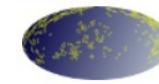
GTC footprint MOC:



Aitoff (click to see an enlarg

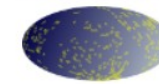
View MOC in Aladin (use Beta versio
Download MOC

Photometric Catalog of Northern Bright Galaxies (Kodaira+ 1992)



Photometric Catalog of Northern Bright Galaxies
Info in catalogue: Av
More info
Search radius: 5 arcsec

RR Lyrae Metallicities (Layden 1994)



RR Lyrae data II. The Metallicities and Kinematics of Local RR Lyrae
Info in catalogue: Av
More info
Search radius: 5 arcsec

UV Interstellar Extinction (Savage+ 1985)



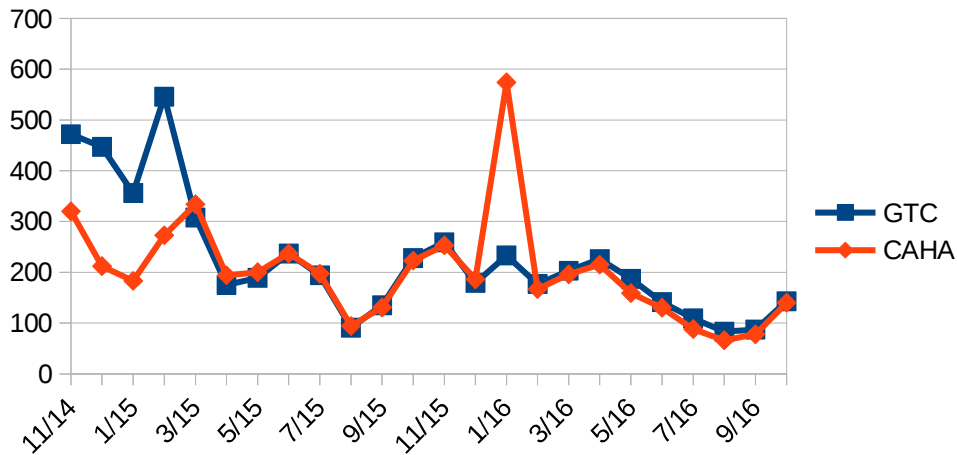
A Catalogue of UV Interstellar Extinction Excesses for 1415 stars
Info in catalogue: E(B-V)
More info
Search radius: 5 arcsec



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2. Data access



Both services have similar access.
GTC has 1816 different IPs
CAHA has 3152 different IPs

Service Limits:

- Search radius limited to 10deg to avoid whole archive searches (radius. 180deg)
- Validators are not included in the above graph.

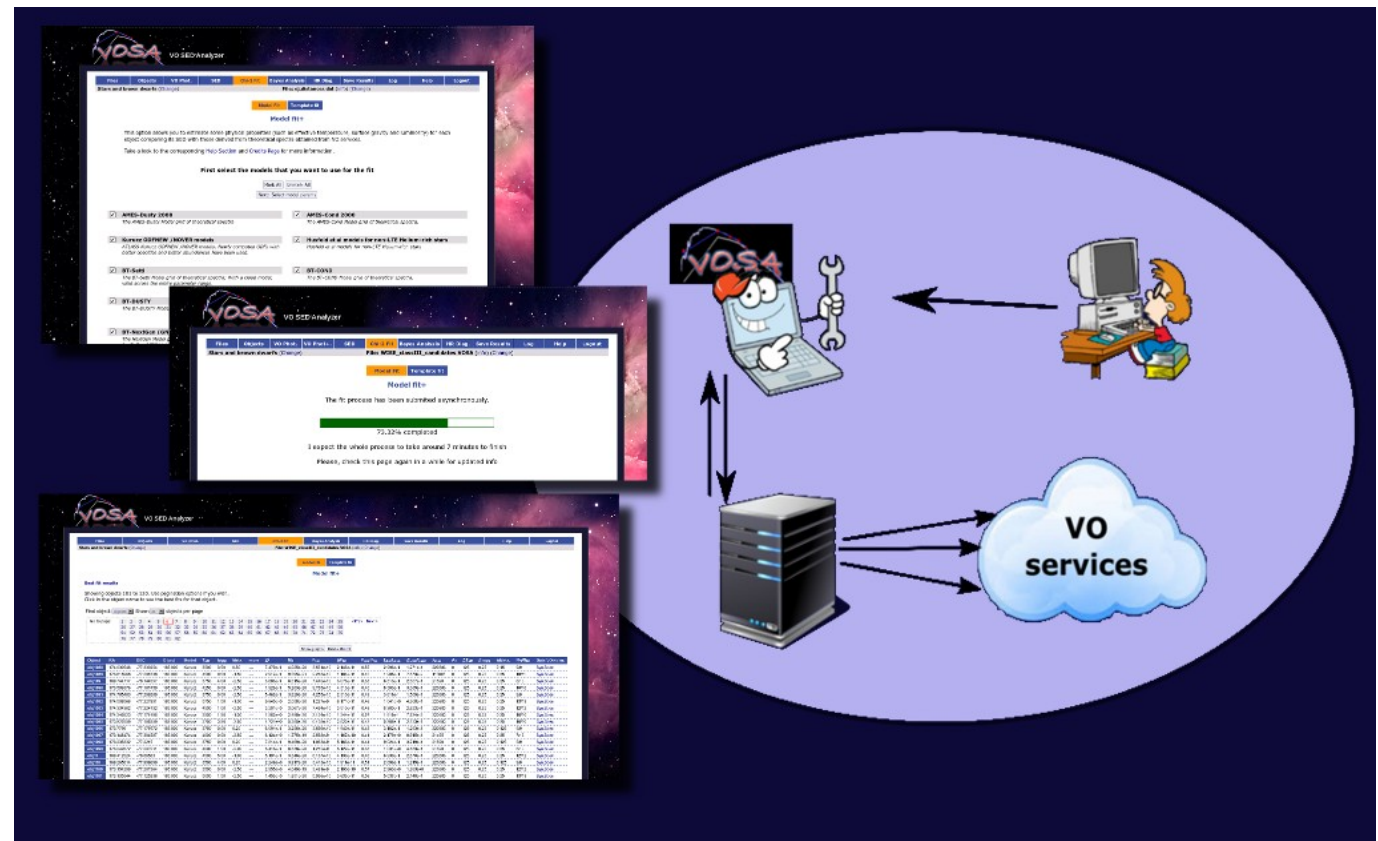


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2. Management of queries

- All our services work in a synchronous way.
- VOSA also implements asynchronous capabilities.



VOSA (Apps 3)
Carlos Rodrigo



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3.Support to Spanish Data Centers

In order to provide support to the data provider community, we work in two different scenarios:

- **Data builders who do not want to manage an archive.** We offer them to take care of all archive-related activities. This is the case for all the archives available at CAB data centre.
- **Data builders who do want to manage the archives** but need support to make them VO-compliant.

- **Activities:**

- Community workshops.
- Development of publishing tools.





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3.Support to Spanish Data Centers

INTA First SVO Workshop on data publishing in the Virtual Observatory **SVO**

Page 1 of 2

Page ID	Start	Stop	ObsID	Filter	Wavelength	Resolution	Bandwidth	Wavelength	Resolution	Bandwidth	Wavelength	Resolution	Bandwidth
201501	01:45:13.0	00:01	244.83000	126.76300	0.00000	0.00000	0.00000	126.76300	0.00000	0.00000	126.76300	0.00000	0.00000
201502	01:45:13.0	00:01	244.83000	126.76300	0.00000	0.00000	0.00000	126.76300	0.00000	0.00000	126.76300	0.00000	0.00000
201503	01:45:13.0	00:01	244.83000	126.76300	0.00000	0.00000	0.00000	126.76300	0.00000	0.00000	126.76300	0.00000	0.00000
201504	01:45:13.0	00:01	244.83000	126.76300	0.00000	0.00000	0.00000	126.76300	0.00000	0.00000	126.76300	0.00000	0.00000
201505	01:45:13.0	00:01	244.83000	126.76300	0.00000	0.00000	0.00000	126.76300	0.00000	0.00000	126.76300	0.00000	0.00000
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201510	01:45:13.0	00:01	244.83000	126.76300	0.00000	0.00000	0.00000	126.76300	0.00000	0.00000	126.76300	0.00000	0.00000

Centro de Astrobiología
Villafranca del Castillo
Madrid, 2014 April 8 and 9

Credit: A. Nota (ESA/STScI) et al., ESA, NASA

Workshops to bring together SVO staff with Data providers: interchange of ideas and requirements.



First workshop on data publishing that took place at CAB in March 2015



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3.Support to Spanish Data Centers

We have developed a couple of tools (SVOCat and MySpec/Myimg) to ease the publication of spectra, images and catalogues.

SVOCat Documentation

Version 0.4, Apr 2014, author: Carlos Rodrigo



Home Download Documentation Examples Credits Help-Desk

- 1. Introduction
- 2. Download
 - 2.1. Extract
 - 2.2. Permissions
- 3. The files
- 4. Example

(You can see this documentation as a single web page if you wish)

Introducción

SVOCat web page

CENTRO DE ASTROBIOLOGÍA			
Title: MySpec-MyImg			
Subtitle: Tools for publication of spectra and images in the Virtual Observatory			
Unidad de Archivo de Datos	2014-04-02	Page 1 of 20	



UNIDAD DE ARCHIVO DE DATOS

Centro de Astrobiología

INTA-CSIC





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3.Support to Spanish Data Centers

Some implementations:

IACOB, an spectroscopic database using MySpec

Spex, in process using MySpec

Welcome to the SpeX Prism Library!



Go to the **NEW** SpeX Prism Library Analysis Toolkit (SPLAT) website



Go to the old SpeX Prism Library (SPL) website

and coming soon...



The UCSD SPL-SQL Data Query Tool



The Spanish Virtual Observatory Data Query Tool




IACOB Spectroscopic database

Search form

The IACOB project is an ambitious long-term project which is contributing to the modern era of investigation of massive stars by concentrating in Galactic OB stars. In particular, the project aims at building a large database of high-resolution, multi-epoch spectra of Galactic OB stars (the IACOB spectroscopic database), and the scientific exploitation of the database using state-of-the-art models and techniques.

More details about the project can be found in Simon-Diaz et al. (2011a, 2011b, 2015) and the [project webpage](#).

This is the interface to have access to the IACOB spectra. The different data releases (DRx) will be conveniently announced; in the meanwhile people interested in specific (samples of) spectra can contact the PI of the project by email: ssimon@iac.es

The IACOB spectroscopic database is based on observations made with the **Nordic Optical Telescope** operated by Nordic Optical Telescope Scientific Association, and the **Mercator Telescope**, operated by the Flemish Community, both at the Observatorio de El Roque de los Muchachos (La Palma, Spain) of the Instituto de Astrofísica de Canarias

Search by Obj ID/Coordinates:

ObjID/ Coordinates: Examples: 245.10 -15.67 - Coordinates in decimal degrees
16 20 24.5 -15 40 12.0 - Coordinates in sexagesimal degrees

Search radius: (decimal degrees)

Search by TARGET:

TARGET:

Search by DATA_RELEASE:

DATA_RELEASE: DR1: FIES observations between 2008 and 2009

Search by INSTR:

INSTR: FIES or HERMES

Number of Results per Page: Page to show:



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9 Conesearch using SVOCat,
6 of them have implemented
a MOC service

THROES Catalogue

First THROES Catalogue V1.0



RA (°)	DEC (°)	Radius (°)	Search	Reset
<input type="text"/>	<input type="text"/>	<input type="text" value="360"/>	<input type="button" value="10 results"/>	<input type="button" value="default verb."/>

(Maximum Search Radius at 10 results)

Hide additional search fields

Name (°)	<input type="text"/>
RA (hh:mm:ss) (°)	<input type="text"/>
dec (dd:mm:ss) (°)	<input type="text"/>
AOT (°)	<input type="text"/>
#Obs (°)	<input type="text" value="---"/>
Secondary Classification (°)	<input type="text" value="O rich AGB"/>
Main Classification (°)	<input type="text" value="Evolved low-intermediate mass star"/>

First 10 results shown (25 found)

Δ (°)	RA (ICRS) (deg)	DEC (ICRS) (deg)	RA (ICRS) (hh:mm:ss)	DEC (ICRS) (hh:mm:ss)	Name (°)	AOT (°)	#Obs (°)
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125811.43	34.836625	-2.97763888888889	02:19:20.79	-2:58:39.50	OMI_CET	PacsRangeSpec	2
185003.64	359.603625	51.38880555555556	23:58:24.87	51:23:19.70	R_CAS	PacsRangeSpec	2
207370.65	302.616125	-6.27044444444444	20:10:27.87	-6:16:13.60	V1300_Aql-1	PacsRangeSpec	2
207377.64	302.614208333333	-6.27102777777778	20:10:27.41	-6:16:15.70	IRC_-10 529	PacsRangeSpec	2
208821.17	306.979958333333	-28.2610555555556	20:27:55.19	-28:15:39.80	T_Mic	PacsRangeSpec	3
212632.49	58.3701666666667	11.4062777777778	03:53:28.84	11:24:22.60	NML_TAU	PacsRangeSpec	3
212632.82	58.3702916666667	11.4060277777778	03:53:28.87	11:24:21.70	IK_Tau	PacsLineSpec	1
214140.12	311.606083333333	40.1165555555556	20:46:25.46	40:06:59.60	NML_CYG	PacsRangeSpec	2
218222.09	299.40025	-1.88647222222222	19:57:36.06	-1:53:11.30	RR_Aql	PacsRangeSpec	1

Download all results as VOTable or CSV file
Open results table in Aladin (via JNLP/webstart)

Shapley Supercluster Survey ShaSS Public Data Catalogue

Shapley Supercluster Survey

ShaSS Public Data Catalogue



Shapley Supercluster Survey: ShaSS Public Data Catalogue

The Shapley Supercluster Survey (ShaSS, $z \sim 0.05$) covers a contiguous area of $260 \text{ h}^{-2} \cdot 70 \text{ Mpc}^2$ including the supercluster core. The project main aim is to quantify the influence of cluster-scale mass assembly on galaxy evolution in one of the most massive structures in the local Universe. The survey includes nine Abell clusters (A3552, A3554, A3556, A3558, A3559, A3560, A3562, AS0724, AS0726) and two poor clusters (SC1327-312, SC1329-313) showing evidence of cluster-cluster interactions. Optical (ugri) and near-infrared (K) imaging acquired with VST and VISTA allow us to study the galaxy population down to m^*+6 at the supercluster redshift. A dedicated spectroscopic survey with AAOmega on the Anglo-Australian Telescope provides a magnitude-limited sample of supercluster members with 80% completeness at $\sim m^*+3$.

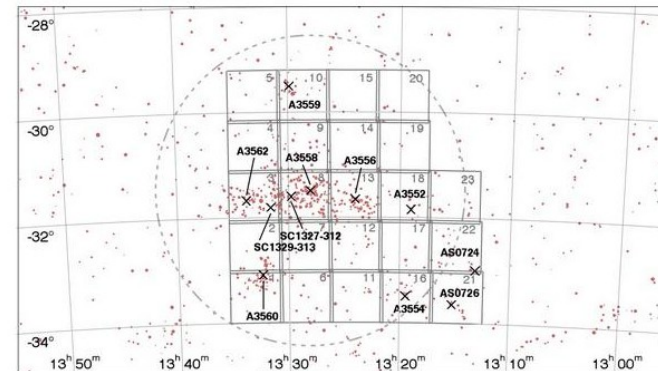


Fig. 1 – The 23 1 sqdeg VST fields mapping the ShaSS region. Red dots indicate the supercluster members in the range $V_h=11300-17000 \text{ km/s}$ taken from literature. The size of the dots are proportional to the K-band flux. Black crosses show the cluster centres. The 10 Mpc radius dotted circle encloses the supercluster region believed to be dynamically bound. The Shapley supercluster core corresponds to fields #3,8,13. The positions of all structures present in the plotted area in the given redshift range are indicated.

Resources

- Data retrieval
- News
- Documentation
- Help-Desk

2015MNRAS.453.3685M