

Primera Reunión de la Red Temática SVO.
Madrid, Abril 6-7, 2006

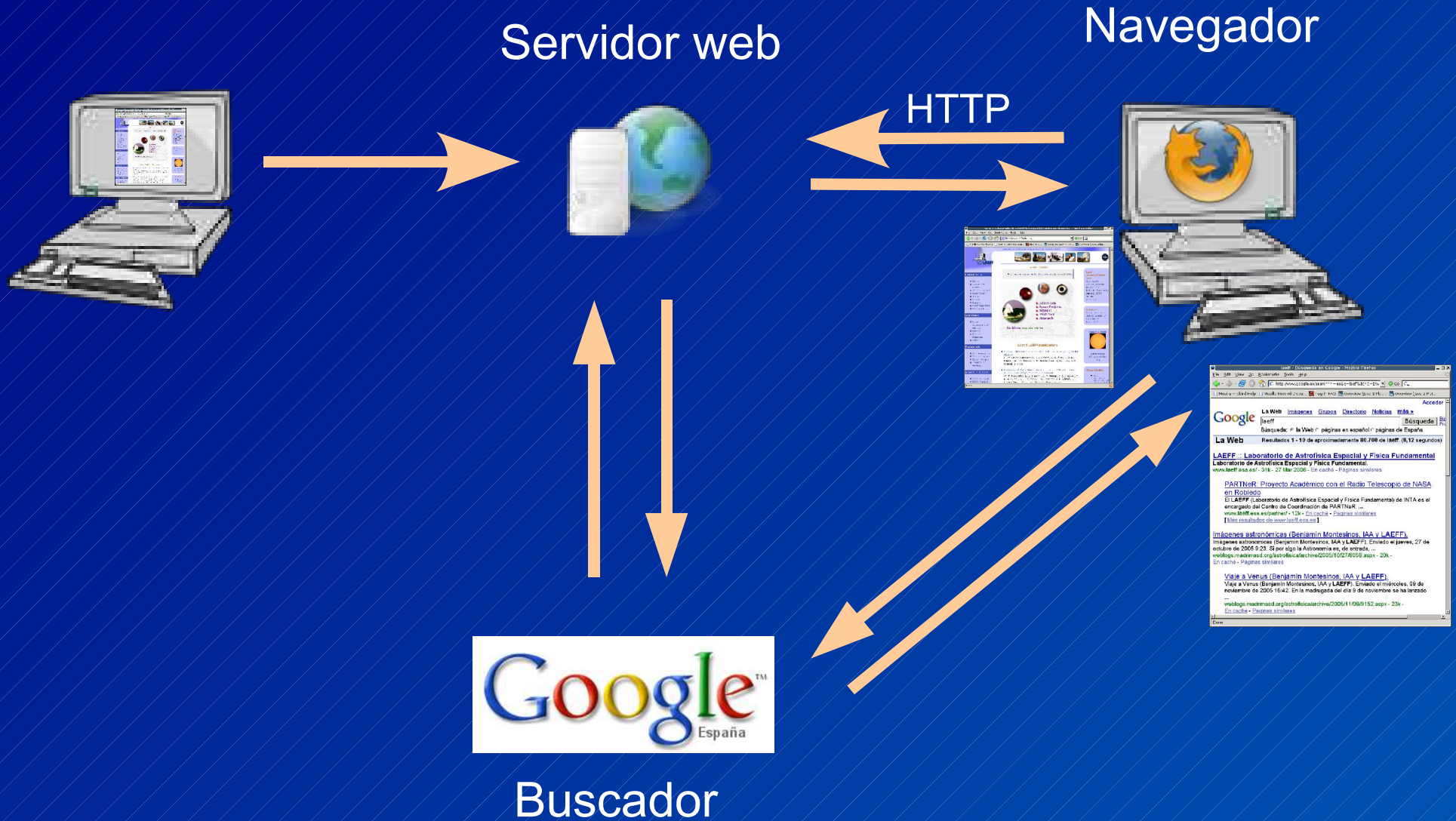


Estándares del OV

Cómo publicar en el OV

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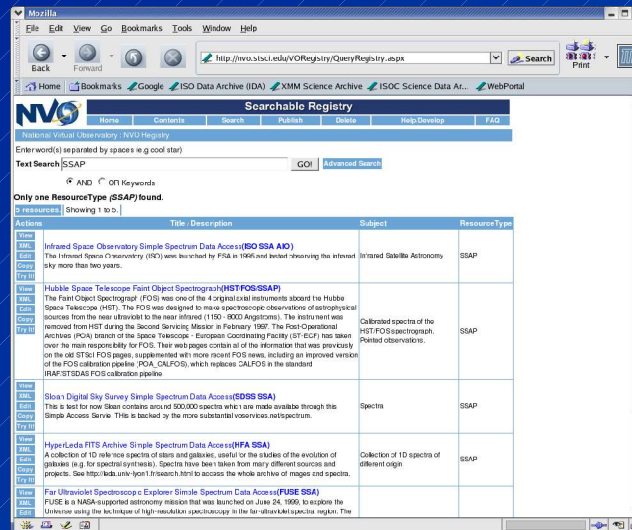
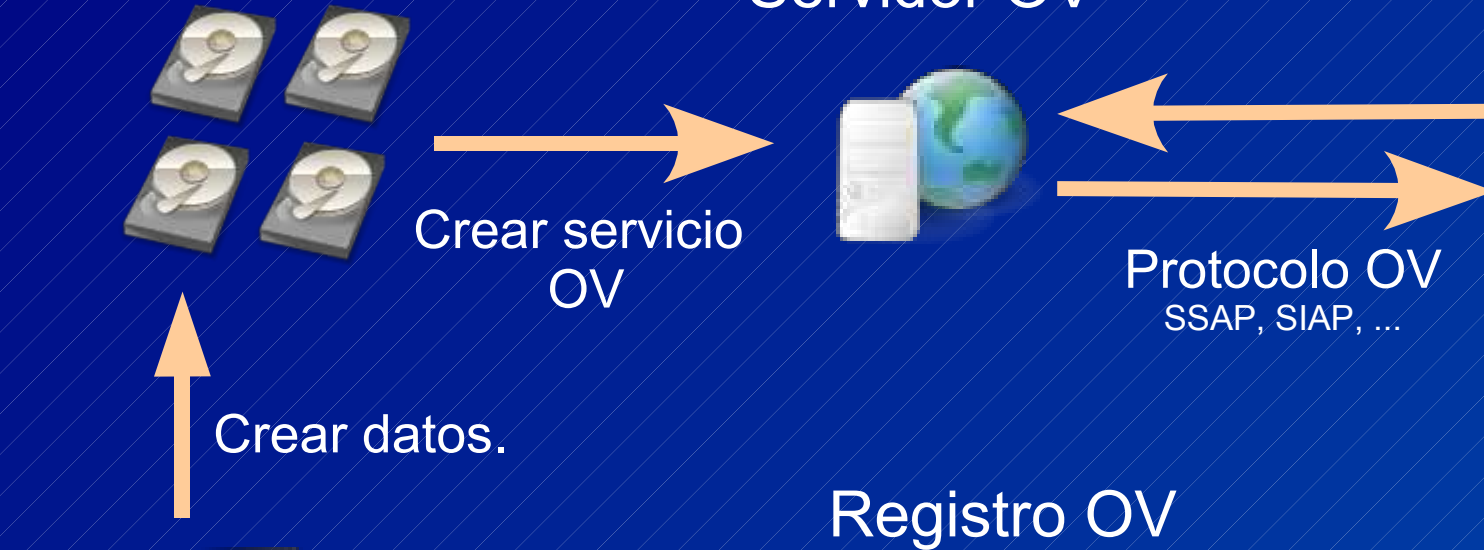
Publicar en Internet



Publicar en el OV

Herramienta OV

Servidor OV



“Estándares” OV

Formato Estándar

- VOTable

Protocolo de Acceso

- ConeSearch
- SSAP / SIAP
- SkyNode

Representación Estándar

- Modelo de Datos

VOTable

- Formato XML para el intercambio y almacenamiento de datos tabulares en el entorno del OV.
- Compuesto de
 - Metadatos: descripción de los datos y su estructura.
 - Datos: locales o remotos.

Ejemplo de VOTable

```
<?xml version="1.0"?>
<VOTABLE version="1.1" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:noNamespaceSchemaLocation="http://www.ivoa.net/xml/VOTable/VOTable/v1.1">
  <COOSYS ID="J2000" equinox="J2000." epoch="J2000." system="eq_FK5"/>
  <RESOURCE name="myFavouriteGalaxies">
    <TABLE name="results">
      <DESCRIPTION>Velocities and Distance estimations</DESCRIPTION>
      <PARAM name="Telescope" datatype="float" ucd="phys.size;instr.tel"
        unit="m" value="3.6"/>
      <FIELD name="RA" ucd="pos.eq.ra;meta.main" ref="J2000"
        datatype="float" width="6" precision="2" unit="deg"/>
      <FIELD name="Dec" ucd="pos.eq.dec;meta.main" ref="J2000"
        datatype="float" width="6" precision="2" unit="deg"/>
      <DATA>
        <TABLEDATA>
          <TR><TD>010.68</TD><TD>+41.27</TD></TR>
          <TR><TD>287.43</TD><TD>-63.85</TD></TR>
          <TR><TD>233.52</TD><TD>+72.18</TD></TR>
          <TR><TD>171.81</TD><TD>-14.72</TD></TR>
        </TABLEDATA>
      </DATA>
    </TABLE>
  </RESOURCE>
</VOTABLE>
```

Metadatos
(~cabecera FITS)

Datos

SSAP / SIAP

- Protocolos específicos para el acceso a espectros (SSAP) e imágenes (SIAP).
- Basados en HTTP/GET.

<http://servidor.es/ssap.jsp?POS=234.27,-45.18&SIZE=0.5>

- Más complejos que ConeSearch: mas parámetros, algunos obligatorios y otros opcionales.
- Salida: VOTable con una estructura predefinida.
- Relacionados con un DataModel estándar: hablar el mismo idioma.

```
<FIELD ID="Camara" name="Camara" utype="sed:Segment.DataID.Instrument"  
ucd="instr.id" datatype="char" arraysize="*">
```

- Mecanismo para preguntar por las características de cada servicio: <http://servidor.es/siap.jsp?format=metadata>

SkyNode

- Interfaz para el acceso a catálogos.
- Basado en Servicios Web (más complejo que SSAP y SIAP).
- Permite consultas de similares a SQL mediante ADQL.
- ADQL: Astronomical Data Query Language. Lenguaje basado en SQL para realizar consultas a catálogos en el entorno del OV.

SkyNode (II)

The screenshot displays the 'Open SkyQuery' web interface. At the top, there is a navigation bar with tabs for 'Home', 'Query', 'Import', 'Tutorial', and 'Help'. The main content area is divided into three sections:

- Nodes:** A vertical list of astronomical survey names, each with a '+' icon to its right. The list includes Rosat, XMM, GALEX, DLS, RC3, Abell, GSC2, SDSS, SDSSDR2, SDSSDR3, TwoDF, Twoqz, USNOB, GOODS, HDFN, HDF5, UDF, ISO, TWOMASS, IRAS, PSCz, ADIL, FIRST, NVSS, DEEP2, NDWFS, HVORRegistry, and phoenix.
- Query Builder:** A central text area with 'Build' and 'Edit' tabs at the top. A 'Submit' button is located to the right. The query text is:

```
SELECT o.objid, o.ra,
       o.dec, o.type, t.objid,
       tj_m, o.z
FROM
  SDSSDR2:PhotoPrimary o, TWOMASS:PhotoPrimary t
WHERE XMATCH(o, t) < 2.5 AND
      Region('CIRCLE J2000 16.031 -0.891 30') AND
      (o.z - tj_m) > 2
```
- Sample Queries:** A list of pre-defined queries on the right side, each with a '+' icon: XMatch/Region, XMatch/Region 2, Three Node Match, Brown Dwarf Search, MyData XMatch (upload), Xmatch t. (upload), ABELL Xmatch (upload), Single Node Query, and Single Node Join.

Below the query text, there is a welcome message and instructions:

Welcome to the Open SkyQuery interactive query builder. You should see a parsed, clickable version of your entered query in the pane directly above this one.

If instead you see 'Query is empty', this means that builder needs a node or two to get started. You can add nodes to the builder by clicking the desired node's '+' icon in the left panel.

Once you have some sql in the above panel, you can then click on a token in that query to pull up a menu with options appropriate for that specific token. For example, one way to select an additional column from a mythical 'mytable' is to click on 'mytable' and then chose 'Add Selection', then pick the desired column from the given choices.

You can switch between 'edit' and 'build' modes at any time by using the tabs at the top of the query panel. Your changes from one will carry over to the other. Most menu options have additional mouse-over info.

Registro OV

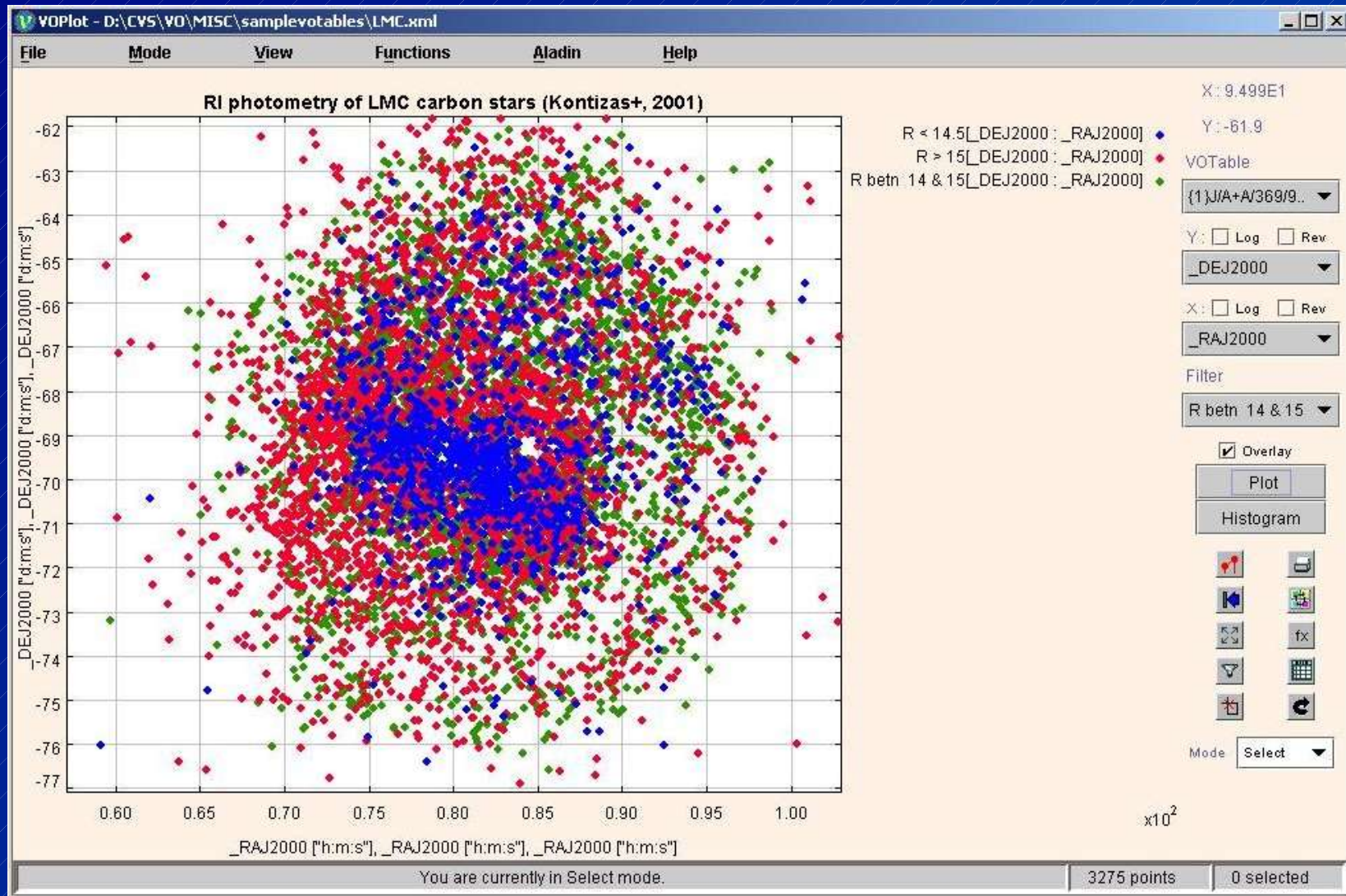
- Páginas amarillas del OV. Sirve para:
 - Publicar un servicio.
 - Saber qué servicios hay disponibles, que datos proporcionan y cómo se accede a ellos.
- Almacenan información detallada de los servicios:
 - URL de acceso.
 - Datos que almacenan.
 - Protocolos que entienden.
 - (Calidad y nivel de conformidad con los estándares).
- Pueden preguntarse unos a otros para actualizar su información.

Estado de los “Estándares”

- VOTable: Recomendación, v1.1
- ConeSearch: ---
- SSAP: Working Draft, v0.91
- SIAP: Working Draft, v1.0
- Data Model: Working Draft, v0.95
- SkyNode: Working Draft, v1.01
- ADQL: Working Draft, v1.02



Aplicaciones OV: VOPlot



Aplicaciones OV: Topcat

The image displays a collage of various Topcat software windows, illustrating its multi-panel interface for astronomical data analysis. Key windows include:

- Starlink TOPCAT**: The main application window showing the Table List, Current Table Properties, and menu options.
- Cone Search**: A window for defining search parameters like RA, Dec, and Radius.
- Histogram**: A plot showing the distribution of objects across magnitude bins.
- Set Activation Action**: A window for defining cutout services and activation criteria.
- Match Tables**: A window for defining match criteria and joining tables.
- Density Plot**: A 2D plot showing the density of objects in a specific region.
- 3D**: A 3D scatter plot showing the distribution of objects in a 3D space.
- Axis Configuration**: A window for configuring the axes of a plot.
- Scatter Plot**: A 2D scatter plot showing the relationship between two variables.
- Sky Coordinate Columns**: A window for defining sky coordinate columns.
- Table Browser**: A window for browsing and filtering data tables.



Aplicaciones OV: Aladin

The screenshot displays the Aladin v3.0 multiview software interface. The main window shows a multi-color astronomical image of the Trifid Nebula. The interface includes a menu bar (Load..., Save..., Tools..., Print..., Help..., Quit), a status bar (Position: J2000, 18:02:31.33 -22:57:55.5, Pixel: 8 bits, 162/145/055), and a toolbar with various tools like select, dist, draw, tag, text, filter, rgb, blink, isamp, zoom, mglass, hist, prop, and del. A panel on the right shows the Trifid nebula and a list of data sources: Circ.Mag, HST, USNO-B1, RGB img, SERC.S.MAN, SERC.I.MAM, and SERC.V.DSS. A zoomed-in view of a region is shown in the bottom right. At the bottom, a table displays data for the selected region.

Image	PCimage	M20-TC1	18 02 26.57	-23 01 20.6	WFPC2	548.3	
Image	PCimage	M20-TC1	18 02 26.57	-23 01 20.6	WFPC2	548.3	
Association(CADC)		270.5885	-23.0330	2001-07-05T12:30:14	600.0	HD164492A	
0669-0683137	270.586123	-23.039303	1964.9	0	0.2	9.84	10.99 0 0
0669-0683138	270.596381	-23.033381	2000.0	0	-12.0	8.64 8.66 8.65 8.66 8.68	0 0

(c)1999-2005 ULP/CHRS - Centre de Données astronomiques de Strasbourg 7 planes, 1 view, 20Mb

Aplicaciones OV: VOSED

Search by object name or coordinates

Registered SSAP services

Catalogue info (Vizier)

LAEFF VOSED - Search form - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

SVO LAEFF VOSED - Search form (Untitled)

SVO Spanish Virtual Observatory

Funded by

MINISTERIO DE EDUCACIÓN Y CIENCIA INTA

SED Fitting Tool: Search Form

Object ID:

Position: R.A.: DEC.: Size:

Data Services:

Spectroscopic Data

- Infrared Space Observatory Simple Spectrum Data Access
- Hubble Space Telescope Faint Object Spectrograph
- HyperLeda FITS Archive Simple Spectrum Data Access
- INES: The IUE Newly Extracted Spectra
- Far Ultraviolet Spectroscopic Explorer (Simple Spectrum Data Access)
- Infrared Space Observatory Simple Spectrum Data Access
- The GIRAFFE Archive (Science Ready Data)
- Sloan Digital Sky Survey Simple Spectrum Data Access
- Spectrum Service @ JHU - TEST VERSION
- Hubble Space Telescope Spectra
- Extreme Ultraviolet Explorer Merged Spectra
- Hopkins Ultraviolet Telescope
- Wisconsin Ultraviolet Photo-Polarimeter Experiment

Photometric Data

uvbyß Strömgren photometry: Hauck & Mermilliod Explore Vizier

JHK photometry: 2MASS Explore Vizier

Hipparcos Photometry: Hipparcos Explore Vizier

Done

Aplicaciones OV: VOSED

User's data
from file or
form.

LAEFF VOSED - Search form - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

SVO LAEFF VOSED - Search form (Untitled)

JHK photometry: 2MASS Explore Vizier

Hipparcos Photometry: Hipparcos Explore Vizier

User's Data:

Magnitudes

U u J
B v H
V b K
R y
I

Stellar Physical Parameters

	Value	Error
Teff	8625	200
log g	4.20	0.20
M/H	-0.8	0.1
E(B-V)	0.05	

Load Local Data

Version 0.93 - Sep 2005 © LAEFF-INTA Home - SVO - LAEFF

Done

Aplicaciones OV: VOSED

Spanish Virtual Observatory

SED Fitting Tool: Results

Resolved Object		Equivalent Names				
Search Name	hd141569	BD-03 3833	CCDM J15500-0355A	CSI-03 3833 1	[DML87] 382	
SIMBAD Name	HD 141569	EM* CDS 887	GC 21274	GSC 05026-00042	HD 141569A	
Type	pMS*	HIC 77542	HIP 77542	IDS 15447-0337 A	IRAS 15473-0346	
RA	237.49062	PDS 398	PPM 198989	SAO 140789	SKY# 28618	
DEC	-3.92121	TD1 18598	TYC 5026-42-1	uvby98 100141569 ABC	YZ 93 5502	

Products found matching your criteria		Stellar Physical Parameters		
POS = 237.49062 , -3.921211 SIZE = 0.083333			Value	Error
Infrared Space Observatory Simple Spectrum Data Access	3	T _{eff} (IR)	8227	131
Hubble Space Telescope Faint Object Spectrograph	0	T _{eff} (Strömgren)	10206	
HyperLeda FITS Archive Simple Spectrum Data Access	0	log g	4.07	
INES: The IUE Newly Extracted Spectra	9	M/H		
Far Ultraviolet Spectroscopic Explorer (Simple Spectrum Data Access)	1	E(B-V)	0.0	0.0
Infrared Space Observatory Simple Spectrum Data Access	3	Flags	021122	
The GIRAFFE Archive (Science Ready Data)	0	Strömgren Dist. (pc)	168.2	
Sloan Digital Sky Survey Simple Spectrum Data Access	0	Adopted Dist. (pc)	99.0	
Spectrum Service @ JHU - TEST VERSION	0	Chi ²	0.059	
Hubble Space Telescope Spectra	0			
Extreme Ultraviolet Explorer Merged Spectra	0			
Hopkins Ultraviolet Telescope	0			
Wisconsin Ultraviolet Photo-Polarimeter Experiment	0			
uvby β photometry	1			
JHK photometry	30			
Hipparcos photometry	1			

Summary of the found information.

Object info from Sesame Web Service (CDS)

Computed (red) or user entered (black) physical parameters.

Aplicaciones OV: VOSED

LAEFF VOSED - Search Results - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

SVO LAEFF VOSED - Search Resu... (Untitled)

Infrared Space Observatory Simple Spectrum Data Access ^

Mark	ObsId	Reference	Target_Name	Start_Time	Start_Time
<input type="checkbox"/>	62701509	FITS File	ISO LWS01 Spectrum Target: HD 141569	1997-08-04 08:01:27.624	1997-08-04 08:01:27.624
<input type="checkbox"/>	62701662	FITS File	ISO PHT40 Spectrum Target: HD 141569	1997-08-04 09:02:39.624	1997-08-04 09:02:39.624
<input type="checkbox"/>	62802937	FITS File	ISO SWS01 Spectrum Target: HD 141569	1997-08-05 05:40:44.624	1997-08-05 05:40:44.624

Hubble Space Telescope Faint Object Spectrograph ^

No results found.

HyperLeda FITS Archive Simple Spectrum Data Access ^

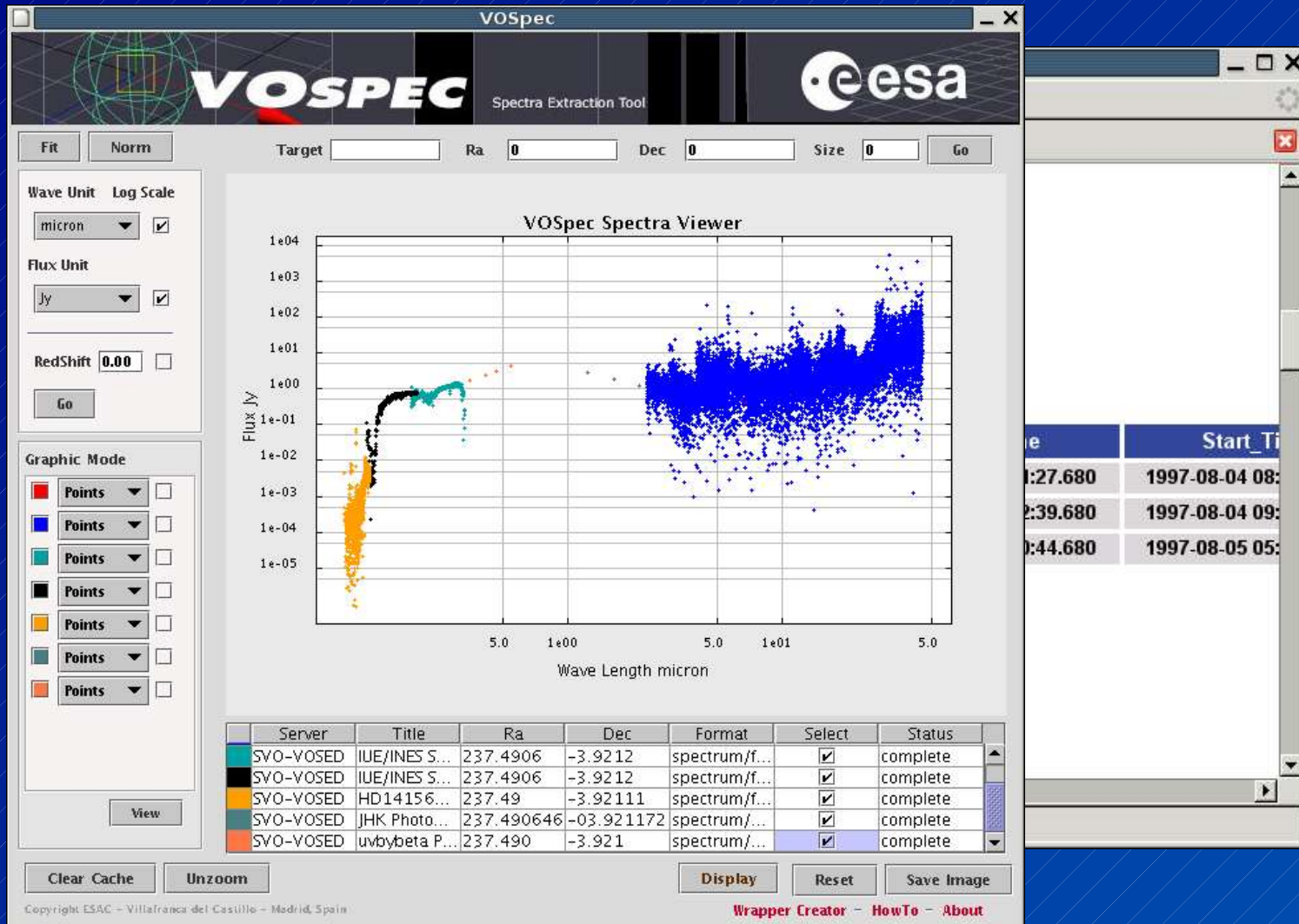
No results found.

INES: The IUE Newly Extracted Spectra ^

Mark	ImageTitle	Camera	Image	Dispersion	Aperture	Object	
<input type="checkbox"/>	IUE/INES Spectrum: LWP12988RL, Target: HD 141569 A	LWP	12988	HIGH	LARGE	HD 141569 A	2
<input type="checkbox"/>	IUE/INES Spectrum: LWP12988HL, Target: HD 141569 A	LWP	12988	HIGH	LARGE	HD 141569 A	2
<input type="checkbox"/>	IUE/INES Spectrum: LWP20658RL, Target: HD 141569 A	LWP	20658	HIGH	LARGE	HD 141569 A	2
<input type="checkbox"/>	IUE/INES Spectrum: LWP20658HL, Target: HD 141569 A	LWP	20658	HIGH	LARGE	HD 141569 A	2
<input type="checkbox"/>	IUE/INES Spectrum: LWP20407RL, Target: HD 141569 A	LWP	20407	HIGH	LARGE	HD 141569 A	2

Done

Aplicaciones OV: VOSED



Aplicaciones OV: VOSED



The screenshot shows a web browser window with the URL `http://marconi:8080 - LAEFF VOSED - Bayes - Mozilla Firefox`. The page header features the SVO logo and the text "Spanish Virtual Observatory", along with a logo for the "MINISTERIO DE EDUCACION Y CIENCIA".

The main content area displays "Best ten models (most probable first):" followed by a table with the following data:

Teff (°K)	Age (myr)	cos(i)	R _d (AU)	R _H (R _*)	Mdot (M _{sun} /yr)	α	Slope	Amax (μm)
10000	10	0.86	300	84	1e-6	0.01	2.5	1.0
10000	10	0.5	300	58	1e-7	0.01	2.5	10.0
10000	10	0.5	800	54	1e-9	0.01	2.5	1.0
10000	10	0.5	300	58	1e-7	0.01	3.5	100
10000	10	0.5	800	54	1e-9	0.01	3.5	1.0
10000	10	0.5	300	58	1e-7	0.01	3.5	1mm
10000	10	0.5	300	58	1e-7	0.01	3.5	10.0
10000	10	0.5	300	84	1e-6	0.01	3.5	10cm
10000	10	0.5	800	84	1e-6	0.01	3.5	10cm
10000	10	0.5	800	54	1e-9	0.01	3.5	10.0

Below the table, it states: "Next time you ask for a display, the calculated models will be available for you to plot."

At the bottom of the page, the footer includes: "Version 0.93 - Sep 2005 © LAEFF-INTA" and navigation links: "Home - SVO - LAEFF".

Enlaces

- Sitio de referencia: IVOA <http://www.ivoa.net>
- Documentos de los estándares:
 - VOTable: <http://www.ivoa.net/Documents/latest/VOT.html>
 - SSAP: <http://www.aoc.nrao.edu/~dtody/ssa/ssa-v091.pdf>
 - SIAP: <http://www.ivoa.net/Documents/latest/SIA.html>
 - Data Model: <http://hea-www.harvard.edu/~jcm/vo/docs/spec95/spec95.pdf>
 - SkyNode: <http://www.ivoa.net/Documents/latest/SNI.html>
- Registros OV:
 - NVO: <http://nvo.stsci.edu/VORegistry/index.aspx>
 - ESAVO: <http://esavo.esa.int/registry/>
- Ejemplo de servicio OV:
<http://sdc.laeff.inta.es/ines/jsp/ssap.jsp?format=metadata>

Enlaces (II)

- Aplicaciones OV:
 - VOSed: <http://sdc.laeff.inta.es/vosed/>
 - VOSpec: <http://esavo.esa.int/vospec/>
 - VOPlot: <http://vo.iucaa.ernet.in/~voi/voplot.htm>
 - Aladin: <http://aladin.u-strasbg.fr/>
 - Topcat: <http://www.star.bris.ac.uk/~mbt/topcat/>
 - etc. : <http://www.ivoa.net/twiki/bin/view/IVOA/IvoaApplications>

Gracias por la atención

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