

DAMA (DARWIN Madrid Archive)

A preparatory VO-compliant data server for the Darwin mission

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Objectives

- ✓ The scientific success of Darwin depends on a careful selection of the stellar targets as well as on a deep knowledge of the properties of the stars and their environments.
- ✓ This will require gathering information from many astronomical data services in a wide variety of types and formats, a very time-consuming task most likely to be done a number of times until the final Darwin configuration is decided.
- ✓ **The goal:** To get all the relevant information already available in astronomical archives and catalogues of the potential Darwin targets taking advantage of the Virtual Observatory standards and tools.

Functionalities

N ::: LAEFF - Darwin stars - Index page ::. - Netscape

... LAEFF - Darwin stars - Index page ...

The screenshot shows the homepage of the Spanish Virtual Observatory (SVO). The header features the SVO logo (blue circle with 'SVO' and 'Spanish Virtual Observatory'), the text 'Spanish Virtual Observatory', the logo of the Universidad Autónoma de Madrid (UAM), the logo of the Instituto de Astrofísica de Canarias (IAC), and the logo of the Instituto de Energías Renovables (IERC). Below the header is a blue bar with the text 'THE DARWIN STARS: Index Page'. A 'Resources' menu is visible, containing links for 'Start' and 'System Overview'. At the bottom, there is footer text 'Version 0.9 - March 2006 © LAEFF-INTA' and 'Home - LAEFF'. A large orange arrow graphic is positioned in the bottom right corner.

THE DARWIN STARS: Index Page

Resources

► Start

► System Overview

Version 0.9 - March 2006 © LAEFF-INTA

Home - LAEFF



Functionalities (II)

Spanish Virtual Observatory

UA
UNIVERSITAT AUTONOMA DE BARCELONA

IEEC

LAEFF

THE DARWIN STARS: Search form

Hipparcos Catalogue:

Plx: Trigonometric parallax (mas)

SpType: Spectral type
* (Ctrl+click to select more than one)

B-V: Johnson B-V colour (mag)

B: Ecliptic latitude

Output Columns:

_RAJ2000 _DEJ2000 pmRA pmDE e_pmRA
 e_pmDE HD Plx e_Plx B-V
 Vmag V-I SpType HIP
 lambda beta Mv d(pc)

- Input catalogue: Hipparcos
- Lum. Classes: none, IV-V, V

Services:

► Photometric Data

uvbyB Strömgren photometry: Hauck - Mermilliod 2MASS Radius: arcmin arcsec

JHK photometry: 2MASS Point Source Catalogue: Radius: arcmin arcsec

IRAS photometry: Faint Source Catalogue: Radius: arcmin arcsec

► Spectroscopic Data

► Physical Parameters

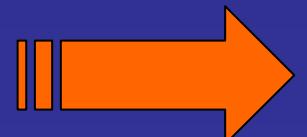
Teff , logg , [Fe/H] , E(B-V) Glebski (2000) Reiners - Schmitt (2003) Explore vizier

Vsini CCDM SB9

Multiplicity

Select Output:

Order by:



Functionalities (III)

Spanish Virtual Observatory

SVO **UA** **IIEC** **LAEFF**

THE DARWIN STARS: Results

Search parameters

Parallax	From: 40.1 To: 41.25
Spectral type	[F]
Johnson B-V colour(mag)	0.25..0.58
Ecliptic latitude	From: -45 To: 45

[New search](#)

Order by:

HIP

Total results: 5

Mark	_RAJ2000	_DEJ2000	HD	Plx	Vmag	SpType	HIP	CCDM	Exo	Photometry	Spectroscopy	Physical Parameters	
<input checked="" type="checkbox"/>	01 14 24.039	-07 55 22.17	7439	41.01	5.14	F5V	5799		1	View	VOServices	S4N	View
<input checked="" type="checkbox"/>	03 40 22.064	-03 13 01.13	22879	41.07	6.68	F9V	17147			View	VOServices	S4N	View
<input checked="" type="checkbox"/>	06 23 46.500	04 35 44.92	44770	41.09	6.72	F5V	30422		1	View	VOServices	S4N	View
<input checked="" type="checkbox"/>	10 36 32.382	-12 13 48.43	91889	40.67	5.71	F7V	51933		1	View	VOServices	S4N	View
<input checked="" type="checkbox"/>	15 38 40.081	-08 47 29.36	139461	40.19	6.45	F6V	76603		1	View	VOServices	S4N	View

[Retrieve/Display Marked Data](#)

In format and notify me at this e-mail address:

I.- Photometry obtained from Vizier using VO access protocols

HIP	HD							
5799	7439							
2Mass data (from Vizier: II/246) ^								
Mark	distance	RAJ2000	DEJ2000	Jmag	e_Jmag	Hmag	e_Hmag	Kmag
<input checked="" type="checkbox"/>	0.00180	018.600164	-07.922856	4.396	0.322	4.019	0.264	4.064
	0.81737	018.593462	-07.910931	6.402	0.026	6.018	0.027	5.884
	0.88315	018.587916	-07.914493	16.848	0.223	15.913	0.178	15.756
Stromgren data (from Vizier: II/215) ^								
Mark	distance	_RAJ2000	_DEJ2000	b-y	m1	c1	Beta	
<input checked="" type="checkbox"/>	0.39619	018.595	-7.927	0.296	0.144	0.439	2.645	
	0.75970	018.591	-7.914	0.473	0.301	0.270	2.554	
IRAS Point Source Catalogue (from Vizier: II/125) ^								
Mark	distance	_RAJ2000	_DEJ2000	IRAS	Fnu_12	Fnu_25	Fnu_60	Fnu_100
<input checked="" type="checkbox"/>	0.09348	018.6012	-7.9240	01118-0811	9.20e-01	2.87e-01	4.00e-01	1.00e+00
IRAS Faint Source Catalogue (from Vizier: II/156A) ^								
Mark	distance	Name	_RAJ2000	_DEJ2000	Fnu_12	Fnu_25	Fnu_60	Fnu_100

Functionalities (IV)

Spanish Virtual Observatory

SVO **UA** **IIEC** **LAEFF**

THE DARWIN STARS: Results

Search parameters

Parallax	From: 40.1 To: 41.25
Spectral type	[F]
Johnson B-V colour(mag)	0.25..0.58
Ecliptic latitude	From: -45 To: 45

[New search](#)

Order by:

HIP Sort 

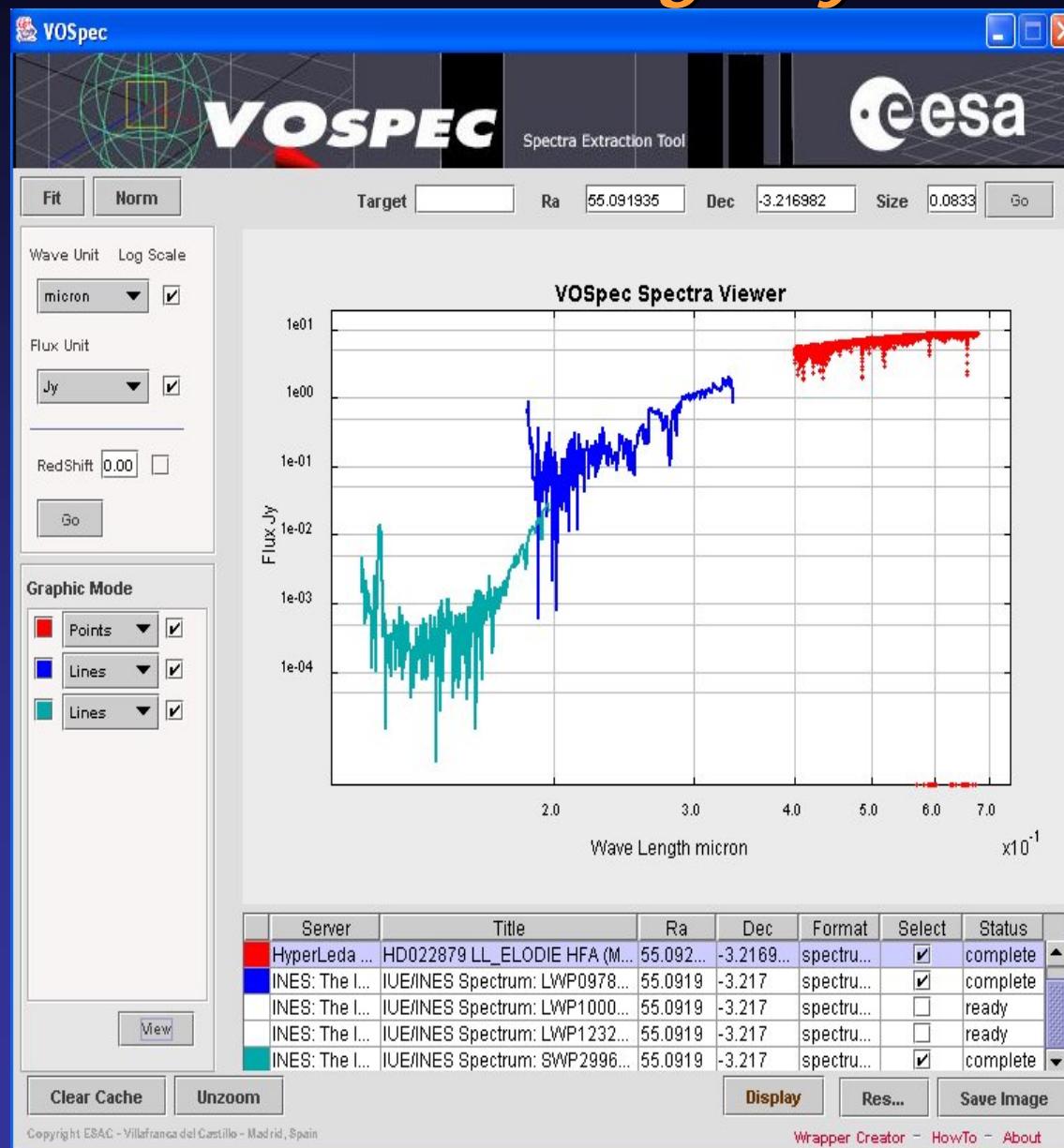
Total results: 5

Mark	_RAJ2000	_DEJ2000	HD	Plx	Vmag	SpType	HIP	CCDM	Exo	Photometry	Spectroscopy	Physical Parameters	
<input checked="" type="checkbox"/>	01 14 24.039	-07 55 22.17	7439	41.01	5.14	F5V	5799		1	View	VOServices	S4N	View
<input checked="" type="checkbox"/>	03 40 22.064	-03 13 01.13	22879	41.07	6.68	F9V	17147			View	VOServices	S4N	View
<input checked="" type="checkbox"/>	06 23 46.500	04 35 44.92	44770	41.09	6.72	F5V	30422		1	View	VOServices	S4N	View
<input checked="" type="checkbox"/>	10 36 32.382	-12 13 48.43	91889	40.67	5.71	F7V	51933		1	View	VOServices	S4N	View
<input checked="" type="checkbox"/>	15 38 40.081	-08 47 29.36	139461	40.19	6.45	F6V	76603		1	View	VOServices	S4N	View

[Retrieve/Display Marked Data](#)

In format and notify me at this e-mail address:

II.- Spectroscopic services obtained from the VO registry



Functionalities (V)

Spanish Virtual Observatory

UA UNIVERSIDAD AUTÓNOMA DE MADRID

IIEC

LAEFF

THE DARWIN STARS: Results

Search parameters

Parallax	From: 40.1 To: 41.25
Spectral type	[F]
Johnson B-V colour(mag)	0.25..0.58
Ecliptic latitude	From: -45 To: 45

[New search](#)

Order by:

HIP [Sort](#)

Total results: 5

Mark	_RAJ2000	_DEJ2000	HD	Plx	Vmag	SpType	HIP	CCDM	Exo	Photometry	Spectroscopy	Physical Parameters	
<input checked="" type="checkbox"/>	01 14 24.039	-07 55 22.17	7439	41.01	5.14	F5V	5799		1	View	VOServices	S4N	View
<input checked="" type="checkbox"/>	03 40 22.064	-03 13 01.13	22879	41.07	6.68	F9V	17147			View	VOServices	S4N	View
<input checked="" type="checkbox"/>	06 23 46.500	04 35 44.92	44770	41.09	6.72	F5V	30422		1	View	VOServices	S4N	View
<input checked="" type="checkbox"/>	10 36 32.382	-12 13 48.43	91889	40.67	5.71	F7V	51933		1	View	VOServices	S4N	View
<input checked="" type="checkbox"/>	15 38 40.081	-08 47 29.36	139461	40.19	6.45	F6V	76603		1	View	VOServices	S4N	View

[Retrieve/Display Marked Data](#)

In format and notify me at this e-mail address:

III.- Search by UCD through all Vizier catalogues

The screenshot shows a Netscape browser window with a blue header bar containing the Netscape logo and window control buttons. The main content area displays two tables of astronomical data for star HIP 76603.

HIP | HD

HIP	HD
76603	139461

Calculated Physical Parameters

	Parameter	Error
Teff IR	6181	63
Teff Stromgren	6236	
Logg	4.65	0.18
Fe/H	0.0	0.1
E(B-V)	0.0	0.0

V_{sini} (from all Vizier catalogs)

Catalog Name	Catalog Code	V _{sini}	V _{sini} error
Glebocki+, 2000	III/226	25.0	
Hoffleit+, 1991	V/50	25.0	
Nordstrom+, 2004	V/117	7.0	
Tokovinin+, 2002	J/A+A/382/118	5.3	0.4

Visualization and retrieval

THE DARWIN STARS: Results

Search parameters

Parallax	From: 40.1 To: 41.25
Spectral type	[F]
Johnson B-V colour(mag)	0.25..0.58
Ecliptic latitude	From: -45 To: 45

New search

Order by:

HIP

Total results: 5

Mark	_RAJ2000	_DEJ2000	pmRA	pmDE	HD	Plx	B-V	Vmag	V-I	SpType	HIP	beta	Mv	I/239/hip_main_multip	Photometry	Physical Parameters	
<input checked="" type="checkbox"/>	01 14 24.039	-07 55 22.17	124.6	278.7	7439	41.01	0.448	5.14	0.54	F5V	5799	-14.606729	3.2		0	View	View
<input checked="" type="checkbox"/>	03 40 22.064	-03 13 01.13	691.6	-212.8	22879	41.07	0.554	6.68	0.66	F9V	17147	-22.169245	4.75		0	View	View
<input checked="" type="checkbox"/>	06 23 46.500	04 35 44.92			44770	41.09	0.450	6.72	0.52	F5V	30422	-18.727408	9999		1	View	View
<input checked="" type="checkbox"/>	10 36 32.382	-12 13 48.43	268.6	-672.4	91889	40.67	0.528	5.71	0.60	F7V	51933	-19.443172	3.76		1	View	View
<input checked="" type="checkbox"/>	15 38 40.081	-08 47 29.36	20.3	-34.0	139461	40.19	0.505	6.45	0.58	F6V	76603	10.407647	4.47		1	View	View

In format and notify me at this e-mail address: when they are available.



Visualization and retrieval (II)



raul@laeff.inta.es

21/03/2006 11:41

To: esm@laeff.inta.es

cc:

Subject: LAEFF-Darwin: Data available.

The data you requested is now available.

You can download the file from the next URL:

http://sdc.laeff.esa.es:80/darwin/jsp/retrieveFile.jsp?file=LAEFF_Darwin.Hipplx_40.1-41.25SpTyp_%5BF%5DBV_m0.25..0.58beta_m-45_p45.57127.xml&fileType=VOTable

You can also use VOPlot to display de data clicking on the next URL:

http://sdc.laeff.esa.es:80/darwin/jsp/displayFile.jsp?file=LAEFF_Darwin.Hipplx_40.1-41.25SpTyp_%5BF%5DBV_m0.25..0.58beta_m-45_p45.57127.xml&fileType=VOTable

Thank you for using the LAEFF-Darwin server

The Darwin preparatory archive

- Four spectroscopic campaigns: Jul05, Nov05, Jan06, Feb06.
- 118 stars observed so far.

The screenshot shows a web browser window with the title bar "The Mozilla Organiza... Latest Builds". The main content area is titled "The DARWIN Archive". It features a blue header bar with "Not logged in" on the left and a "Log in" button on the right. Below this is a sub-header "The DARWIN Archive". A sub-sub-header states "This data server provides access to the DARWIN Archive.". A "Resources" menu bar is visible above the main content. Under "Resources", there is a list of links:

- **Archive search and data retrieval**
- **News**
- **System Overview**
- **Help Desk**
- **Project Documentation**
- **Change your password**

A note at the bottom of the page reads:

The system is developed and maintained by LAEFF. LAEFF is part of the Space Science Division of INTA.
If you use data from the DARWIN archive in your research, please include the following acknowledgement in any resulting publications:
"Based on data from the DARWIN Archive at LAEFF".

At the bottom of the page, there is footer text: "Version 0.1 - March 2006 © LAEFF-INTA" on the left and "Home - LAEFF" on the right. A "Done" button is located at the very bottom left.

Summary

- An easy-to-use web-based interface has been developed. It allows accessing, visualizing, filtering and retrieving all the relevant information of the Darwin potential candidates.

- VO is a MUST. It allows an easy implementation of new catalogues, services and datasets.