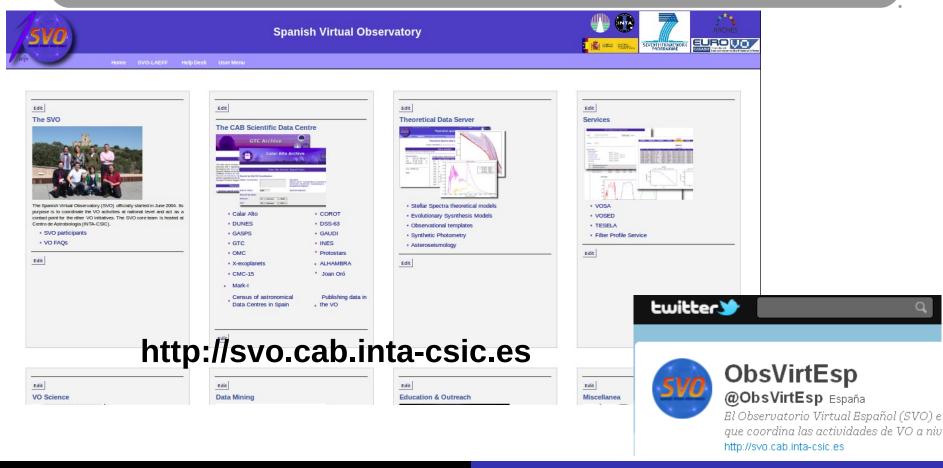# *Spanish VO: Ten years and counting.*

Enrique Solano
(on behalf of the SVO team)

The Spanish Virtual Observatory

- Coordination of the VO-related activities at national level.
- Contact point for international VO initiatives.

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

SVO: Funding

➤ Funded since 2005

- AyA2014-55216 (2015-2017)
- AyA2011-24052 (2012-2014)
- AyA2008-02156 (2009-2011)
- AyA2005- 04286 (2006-2008)
- AyA2004-00253 (2005)

➤ Other funding bodies

- INTA
- Madrid Regional Government
- Europe: FP6 – FP7 - H2020

➢ Centro de Astrobiología (CAB).

- The largest astronomical data centre managed by a Spanish institution (INTA-CSIC).

- Long experience in the management of astronomical archives:

2011

2009

- **Three types of stakeholders:**
  - **Data providers**
    - Willingness to provide a service.
    - Some kind of sustainability.
    - Concern for quality.

  - **Astronomical community**

  - **Education and Outreach**

Making the data available on the web, other than as a tar-file on an anonymous ftp, and especially if it has to be VO compliant may also become a burden. Plez (2007)

➢ **First approach**

- **Your VO** manages the service.

The CAB Scientific Data Centre

GTC Archive

Calar Alto Archive

Calar Alto Archive Search Form

- Calar Alto
- COROT
- DUNES
- DSS-63
- GASPS
- GAUDI
- GTC
- INES

➢ **Second scenario: <u>You</u>** manage the service.

- **Activities focused on three major topics:**

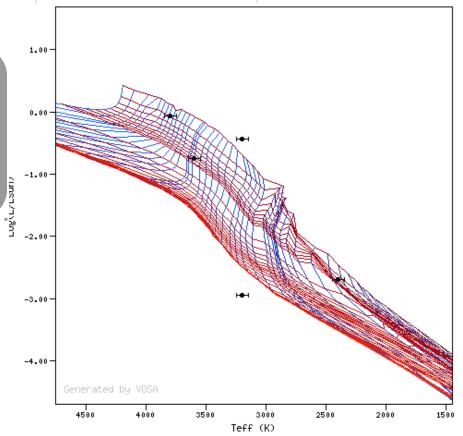   – **Development of VO tools**

    – **Organization of VO-schools**

    – **Support to VO-science**

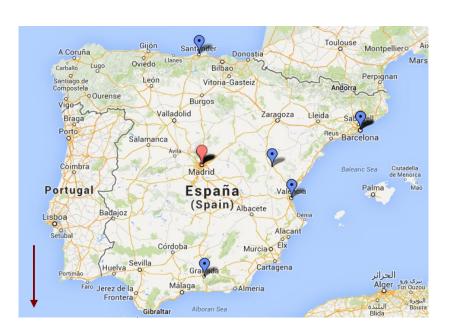|	Object	Model	T_{eff}		LogL		Age			Mass		
☑	LOri005	BT-Settl	3800	(3750,3850)	-0.0652	(-0.0692,-0.0613)	0.0020	..(0.0018,0.0023)	[1]	0.9456	(0.8718,1.0001)	
☑	LOri029	BT-Settl	3200	(3150,3250)	-0.4357	(-0.4463,-0.4253)	---	---	[4]	---	---	[4]
☑	LOri048	BT-Settl	3600	(3550,3650)	-0.7493	(-0.7540,-0.7447)	0.0076	..(0.0060,0.0094)		0.5671	(0.5006,0.6112)	
☑	LOri158	BT-Settl	3200	(3150,3250)	-2.9517	(-2.9580,-2.9455)	---	---	[4]	---	---	[4]
☑	LOri162	BT-Settl	2400	(2350,2450)	-2.6969	(-2.7049,-2.6891)	0.0030	..(0.0020,0.0100)		0.0170	(0.0147,0.0200)	

- First release: 2008
- > 300 active users
- > 50 refereed papers

http://svo2.cab.inta-csic.es/theory/vosa/

SVO schools

- **Goal:** Become familiar enough with VO tools to use them in their own scientific research.

- Best mechanism to attract people.

  - Eight schools since 2009.
  - > 200 participants.

VO Science

- *Science that clearly benefits from using VO tools and services.*

SEARCH FOR BRIGHT NEARBY M DWARFS WITH VIRTUAL OBSERVATORY TOOLS

M. ABERASTURI, J. A. CABALLERO, B. MONTESINOS, M. C. GÁLVEZ-ORTIZ, E. SOLANO AND E. L. MARTÍN

Centro de Astrobiología (CSIC-INTA), Departamento de Astrofísica, PO Box 78, E-28691 Villanueva de la Cañada, Madrid, Spain

A&A 530, A2 (2011)
DOI: 10.1051/0004-6361/201016324
© ESO 2011

Astronomy & Astrophysics

A search for new hot subdwarf stars by means of Virtual Obser...

R. Oreiro[1], C. Rodríguez-López[2,3], E. Solano[4], A.

A&A 534, L7 (2011)
DOI: 10.1051/0004-6361/201117822
© ESO 2011

Astronomy & Astrophysics

LETTER TO THE EDITOR

WISE/2MASS-SDSS brown dwarfs candidates using Virtual Observatory tools*

...turi[1,2], E. Solano[1,2], and E. L. Martín[1]

A&A 556, A144 (2013)
DOI: 10.1051/0004-6361/201321217
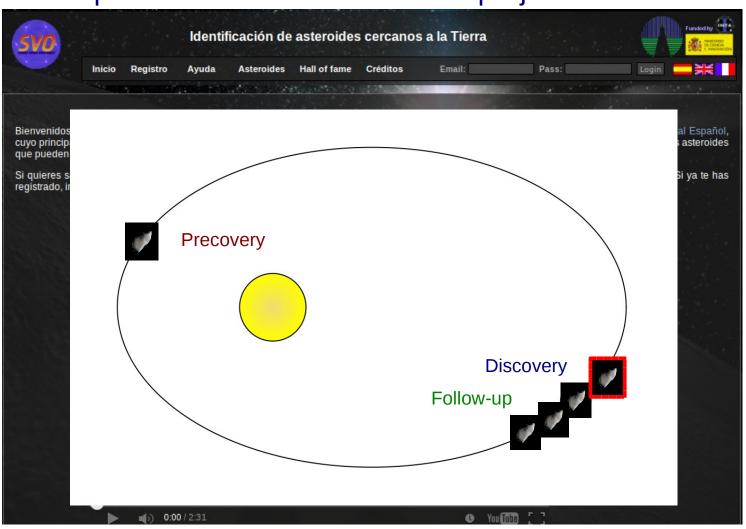© ESO 2013

Astronomy & Astrophysics

Proper motions of young stars in Chamaeleon

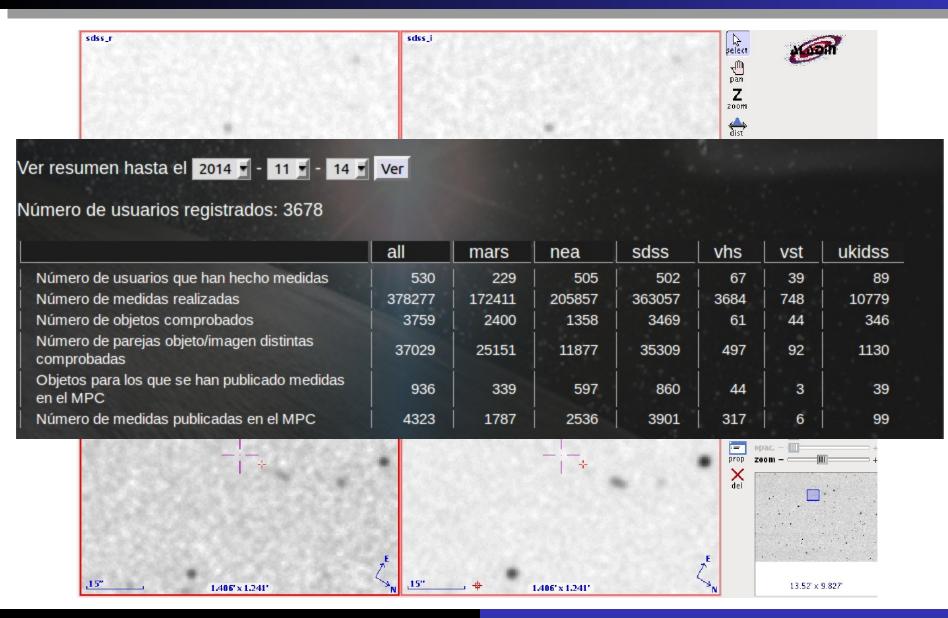### II. New kinematical candidate members of Chamaeleon I and II*

Belén López Martí[1], Francisco Jiménez-Esteban[1,2,3], Amelia Bayo[4,5], David Barrado[1,6], Enrique Solano[1,2], Hervé Bouy[1], and Carlos Rodrigo[1,2]

SVO: Outreach. Citizen science

http://www.laeff.cab.inta-csic.es/projects/near/

sdss_r

sdss_i

Ver resumen hasta el 2014 - 11 - 14 Ver

Número de usuarios registrados: 3678

	all	mars	nea	sdss	vhs	vst	ukidss
Número de usuarios que han hecho medidas	530	229	505	502	67	39	89
Número de medidas realizadas	378277	172411	205857	363057	3684	748	10779
Número de objetos comprobados	3759	2400	1358	3469	61	44	346
Número de parejas objeto/imagen distintas comprobadas	37029	25151	11877	35309	497	92	1130
Objetos para los que se han publicado medidas en el MPC	936	339	597	860	44	3	39
Número de medidas publicadas en el MPC	4323	1787	2536	3901	317	6	99

INTA and ASTERICS

ASTERICS WP4: DADI (Data Access, Discovery and Interoperability)

Task 4.1 - Support to astronomy ESFRI facilities, their pathfinders and other infrastructures of pan-European interest for implementation of their data in the VO framework

Partner	INAF	UHEI	APC	CPPM	OAS	UNIS TRA	LUTH	OBSPAR	UEDIN	ASTRON	INTA
Effort (PM)	36	36	15	8	18	4	3	23	15	26	15

Task 4.2 - Support to the astronomical community

Partner	INTA	OAS	UNIS TRA	APC	CPPM	INAF	LUTH	OBSPAR	UEDIN	ASTRON	UHEI
Effort (PM)	36	32	4	7	2	13	3	7	15	10	10

Task 4.3 - Updates of the VO framework from feedback and requirements

Partner	OAS	UNIST RA	UEDIN	INAF	CPPM	APC	LUTH	UHEI	OBSPAR	ASTRON	INTA
Effort (PM)	32	4	36	17	2	4	1	20	5	6	15