



OAG-SVO SASDABA PROJECT

by T.Tobal and E.Solano

March 2025

OAG-SVO SASDABA PROJECT

- SASDABA PROJECT is a learning & observational Pro-Am project in astronomical spectroscopy, for amateurs, teachers and students interested in the issues of spectral classification in the MK System.
- Its aim is to create an archive of spectroscopic images of bright stars (with approximate $V=5$) in Northern and Southern Hemispheres (All Sky Survey).
- SASDABA stands for:
Star Analyser Spectroscopic DAta BAse
- This project is coordinated by OAG-SVO (Garraf Astronomical Observatory & Spanish Virtual Observatory) in Spain
- In collaboration with :
Astronomical Association of Queensland (Australia)

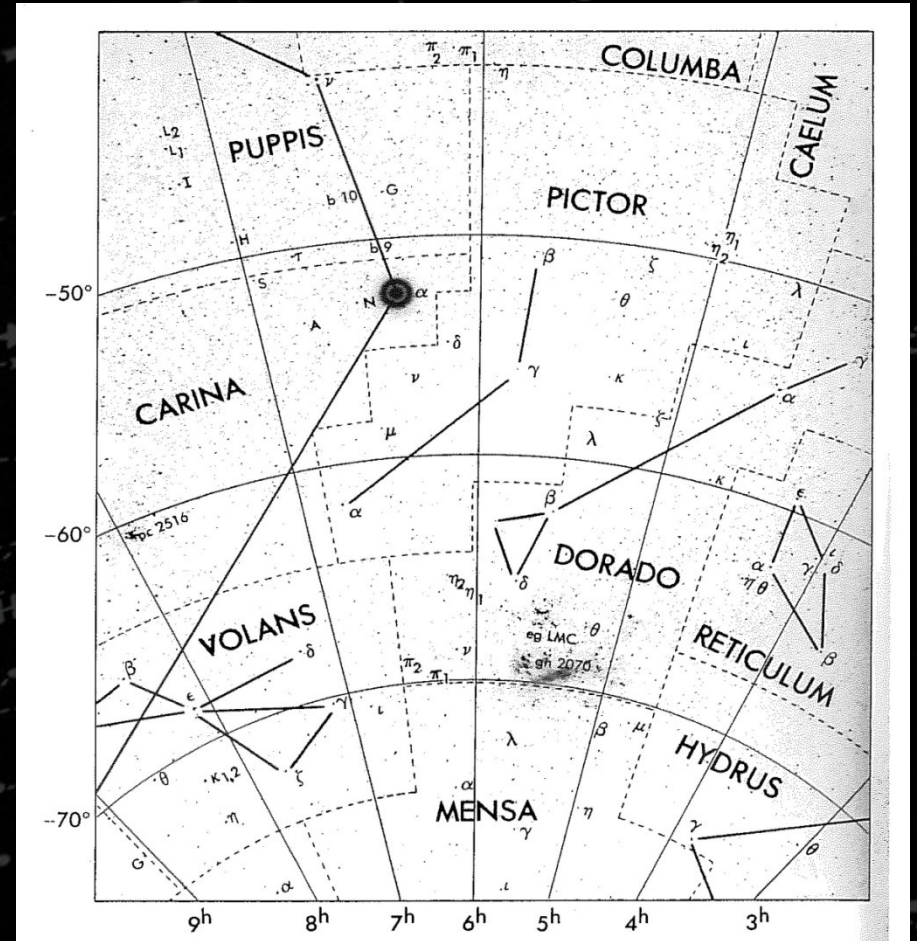
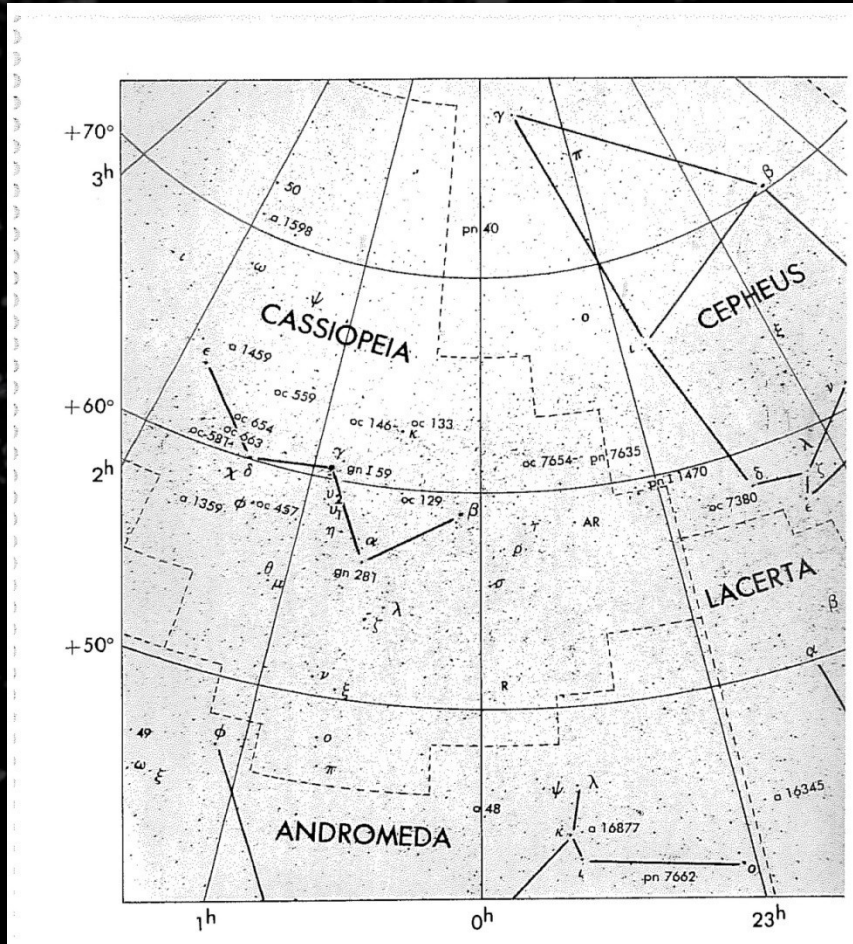
OAG-SVO SASDABA PROJECT



Two teams with Pro-Am members in Spain and Australia allow for full coverage the observations in the

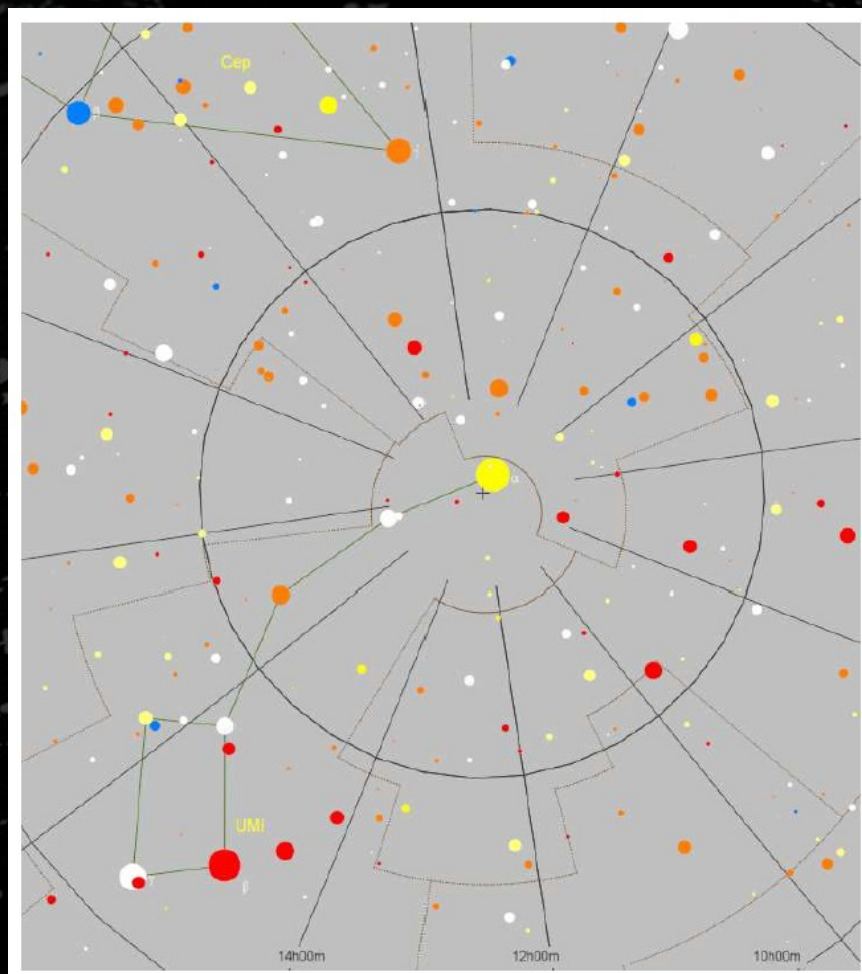
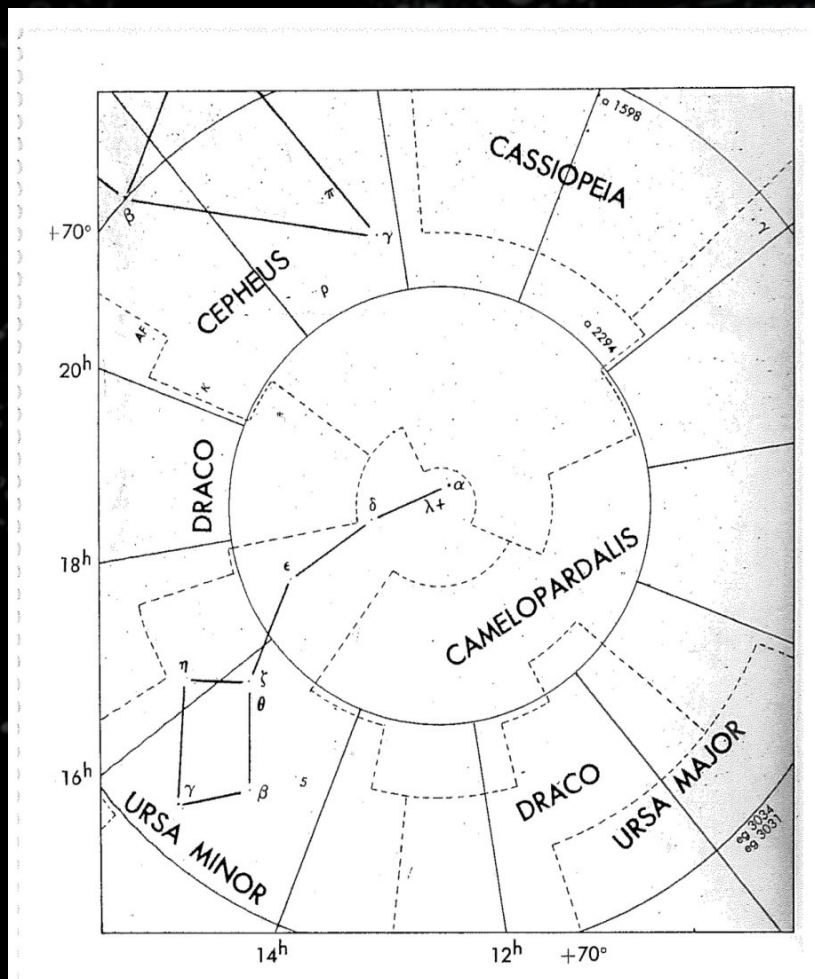
Northern & Southern hemispheres

OAG-SVO SASDABA PROJECT



The Survey Charts (54) for SASDABA Project: Menzel's Photographic Atlas Charts
Harvard Plates: see DASH Project in <http://dasch.rc.fas.harvard.edu/project.php>

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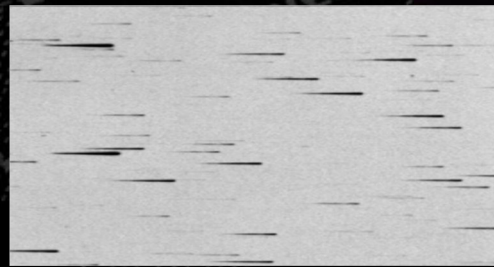
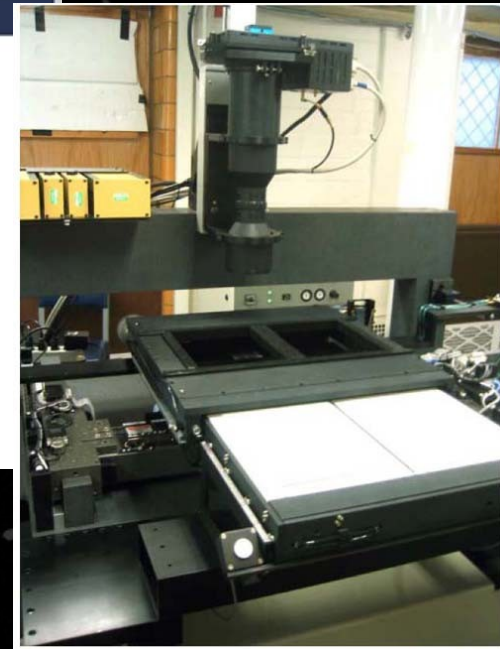
Menzel's PAC and map made with *Cartes du Ciel* for SASDABA Guide

OAG-SVO SASDABA PROJECT

HARVARD UNIVERSITY HARVARD.EDU

DASCH: Digital Access to a Sky Century @ Harvard
A New Look at the Temporal Universe

The Project ▾ The Collection ▾ Search DASCH ▾ History ▾ Links ▾ Contact Us ▾



The DASH project (Digital Access to a Sky Century @ Harvard) taught us a lot about creating the structure and presentation of the results on the OAG website. The photographic charts of the survey for SASDABA are digitized and numbered in DASH.

OAG-SVO SASDABA PROJECT

2. Equipment: CCD and CMOS cameras, gratings, prisms and spectrographs

1



2



3



4

Telescope range: 80mm to 400mm aperture

Dispersion range: 1.5 Å – 22Å / pixel

File type: .avi / .fit / + .txt info

Grating: SA-100/200 & Prism 3.8° (1)

Spectrographs: Alpy600 (2), LHIRES-III (3)

DADOS (4) + 3D_Star'ex_JAS

OAG-SVO SASDABA PROJECT

OBSERVATORI ASTRONÒMIC DEL GARRAF

HOME

GARRAF PARK OBSERVATORY

PUBLIC ACTIVITIES 2025

CONTACT & RESERVES

ISS HD EARTH VIEWING

Garraf Astronomical Observatory
Observatori Astronòmic del Garraf (OAG)

www.oagarraf.net

LAST NEWS / MARCH 2025

Spectroscopic observations of BS, VS, PN and Solar System by M.A.Almela, E.Mañilla, J.J.Pueyo and T.Tobal

**Spectroscopic observations of Solar System by M.A.Almela, J.J.Pueyo and T.Tobal

*SASDABA Newsletter N°11_November_2024

*SVO-OAG SASDABA Data Base 20241022 updated

SVO-OAG SASDABA Data Base NEXT update: April 2025

Project ID	Project Name	Description	Start Year	Status
11	OPEN CLUSTERS (I)	Southern Open Clusters DEC Zone: -15° / -90°	2020+	Active
12	OPEN CLUSTERS (II)	Northern Open Clusters DEC Zone: +90° / -15°	2020+	Available Data
13	SPECTROSCOPY	OAG SPECTRA PROJECT SVO-OAG Star Analyser Spectroscopic Data Base (SASDABA)	2018+	Active

The OAG website: Project 13
www.oagarraf.net

Nº	OAG-SVO SASDABA PROJECT
I	SASDABA-SVO Home
II	Spectra Project Data Recording
III	Spectra Project Logbooks Abstracts
IV	Survey MzPAC Statuts Table
V	Planetary Nebulae Data (in process)
VI	Harvard College Observatory Plates for the Menzel's Photographic Atlas Charts
VII	Stations & Members
VIII	Technical support to observers
IX	SASDABA Publications
X	SASDABA Color Index Charts v1
XI	OAG-SASDABA Classroom send inscription to e-mail: informaciooag@gmail.com
A1	DASCH Digital Access to a Sky Century @ Harvard PHaEDRA PROJECT Transcription of Logbooks
A2	SCOPE PROJECT STELLAR CLASSIFICATION PUBLIC EXPLORATION
A3	Spectral Classes and Stars Colors (Wiky info)
A4	Greek Alphabet

OAG-SVO SASDABA PROJECT

Spanish Virtual Observatory (SVO)

- *IVOA member since 2004.*
- *Coordination of VO activities in Spain.*
- *Four major lines of work:*
 - *VO compliance of astronomical archives.*
 - *Development of VO tools.*
 - *VO-science.*
 - *Education & Outreach.*



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



International Virtual Observatory Alliance

Credit: X-ray: NASA/CXC/CfA/R. Tullmann et al.; Optical: NASA/AURA/STScI

OAG-SVO SASDABA PROJECT



OAG-SVO Star Analyser
Spectroscopic Data Base
(SASDABA)



CENTRO DE ASTROBIOLOGÍA

CSIC



EXCELENCIA
MARÍA
DE MAEZTU

OAG-SVO STAR ANALYSER SPECTROSCOPIC DATA BASE
(SASDABA)

Esp Eng

Pro-Am Project

SASDABA aims to create a database containing spectra of some 2,000 bright stars ($V < 5$) from the northern and southern hemispheres. The spectra are obtained with Star Analyser 100-200 L / mm diffraction gratings to which a 3.8° prism can be added, as well as with various spectrographs (Alpy 600, LHIRE-III, DADOS or similar). The dispersions are of the order of 1 to 20 Å / pix. The instruments used have an aperture range between 80mm to 400mm. ...

[Read more](#)

[Quick guide](#)

[Detailed description of the project](#)

Software RSpec / Real Time Spectroscopy web site by Tom Field
Tutorials by Tom Field
Tutorials YouTube by Tom Field

Search

You can list all the objects and see their observation directly using the **Object list**

Or you can search into the archive using the following criteria:

- Search by date
- Search by object id
- Search by observer id

[Send](#)

The SASDABA interface in SVO web site

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Results

results found

Search selected objects

Select	Search	Name	HD Name	Bayer id	Flamsteed id	SIMBAD	RA (degree)	Dec (degree)	RA	Dec	V?	Spec. Type?
<input type="checkbox"/>	View observations	-	HD225003	c Psc	32 Psc	view	0.62376	8.48546	00 02 29.702+08 29 07.67	5.890		F1V C 2006AJ...132..161G
<input type="checkbox"/>	View observations	Sirrah	HD3358	del Peg	21 And	view	2.09692	29.09043	00 08 23.260+29 05 25.55	2.06		B8IV-VHgMn C 2003AJ...126.2048G
<input type="checkbox"/>	View observations	Caph	HD432	bet Cas	11 Cas	view	2.29452	59.14978	00 09 10.685+59 08 59.21	2.27		F2III C 2003AJ...126.2048G
<input type="checkbox"/>	View observations	-	HD493	kap01 Scl	-	view	2.33778	-27.98793	00 09 21.067 -27 59 16.53	-		F3V C 1982MSS...C03...0H
<input type="checkbox"/>	View observations	Algenib	HD886	gam Peg	88 Peg	view	3.30896	15.18359	00 13 14.151 +15 11 00.94	2.84		B2IV D 2007MNRAS.374..664C
<input type="checkbox"/>	View observations	-	HD1013	chi Peg	89 Peg	view	3.65069	20.20670	00 14 36.165+20 12 24.12	4.800		M2+III B 1989ApJ...71..245K
<input type="checkbox"/>	View observations	-	HD1038	-	7 Cet	view	3.66007	-18.93287	00 14 38.417 -18 55 58.31	4.46		M1III C 1988MSS...C04...0H
<input type="checkbox"/>	View observations	-	HD1061	-	35 Psc	view	3.74517	8.82096	00 14 58.840+08 49 15.46	6.01		F0 E 1993yCat.3135...0C
<input type="checkbox"/>	View observations	-	HD1280	tet And	24 And	view	4.27291	38.68164	00 17 05.499+38 40 53.89	4.61		A2V C -
<input type="checkbox"/>	View observations	-	HD1337	-	-	view	4.42943	51.43309	00 17 43.063+51 25 59.12	6.14		O9.2II+O8V(If) C 2014ApJS...211...10S
<input type="checkbox"/>	View observations	-	HD1404	sig And	25 And	view	4.58191	36.78523	00 18 19.657+36 47 06.81	4.52		AZV C 2012AA...538L...0H

Object List by AR order

Name	HD Name	Bayer id	Flamsteed id	SIMBAD	RA (degree)	Dec (degree)	RA	Dec	V?	Spec. Type?	Date	Time	Obs. CODE	Sci File
Rigel	HD34085	bet Ori A	19 Ori	view	78.63447	-8.20164	05 14 32.272	-08 12 05.90	0.13	B8Iae C 1943ApJ...98..153M	2018-01-29	20:28:54	TOB-1	Avi file
Castor B	HD60178	alf01 Gem	66 Gem B	view	113.65042									
-	HD37020	tet01 Ori A	41 Ori A	view	83.81594									
-	HD37020	tet01 Ori A	41 Ori A	view	83.81594									
Rigel	HD34085	bet Ori A	19 Ori	view	78.63447									

By Date

By object ID

Results

11 results found

Download selected files

Name	HD Name	Bayer id	Flamsteed id	SIMBAD	RA (degree)	Dec (degree)	RA	Dec	V?	Spec. Type?	Date	Time	Obs. CODE	File	
														Sci File	Txt File
North Star	HD8890	alf UMi	1 UMi	view	37.95456	89.26411	02 31 49.095	+89 15 50.79	2.02	F8Ib C 1993ASPC...45...59L	2019-03-23	23:23:26	TOB-1	Avi file	txt file
North Star	HD8890	alf UMi	1 UMi	view	37.95456	89.26411	02 31 49.095	+89 15 50.79	2.02	F8Ib C 1993ASPC...45...59L	2019-03-23	23:22:45	TOB-1	Avi file	txt file
North Star	HD8890	alf UMi	1 UMi	view	37.95456	89.26411	02 31 49.095	+89 15 50.79	2.02	F8Ib C 1993ASPC...45...59L	2019-06-13	01:05:21	TOB-1	Avi file	txt file
North Star	HD8890	alf UMi	1 UMi	view	37.95456	89.26411	02 31 49.095	+89 15 50.79	2.02	F8Ib C 1993ASPC...45...59L	2019-06-13	01:02:22	TOB-1	Avi file	txt file
North Star	HD8890	alf UMi	1 UMi	view	37.95456	89.26411	02 31 49.095	+89 15 50.79	2.02	F8Ib C 1993ASPC...45...59L	2019-06-13	01:11:17	TOB-1	Avi file	txt file

2049 results found

Download selected files

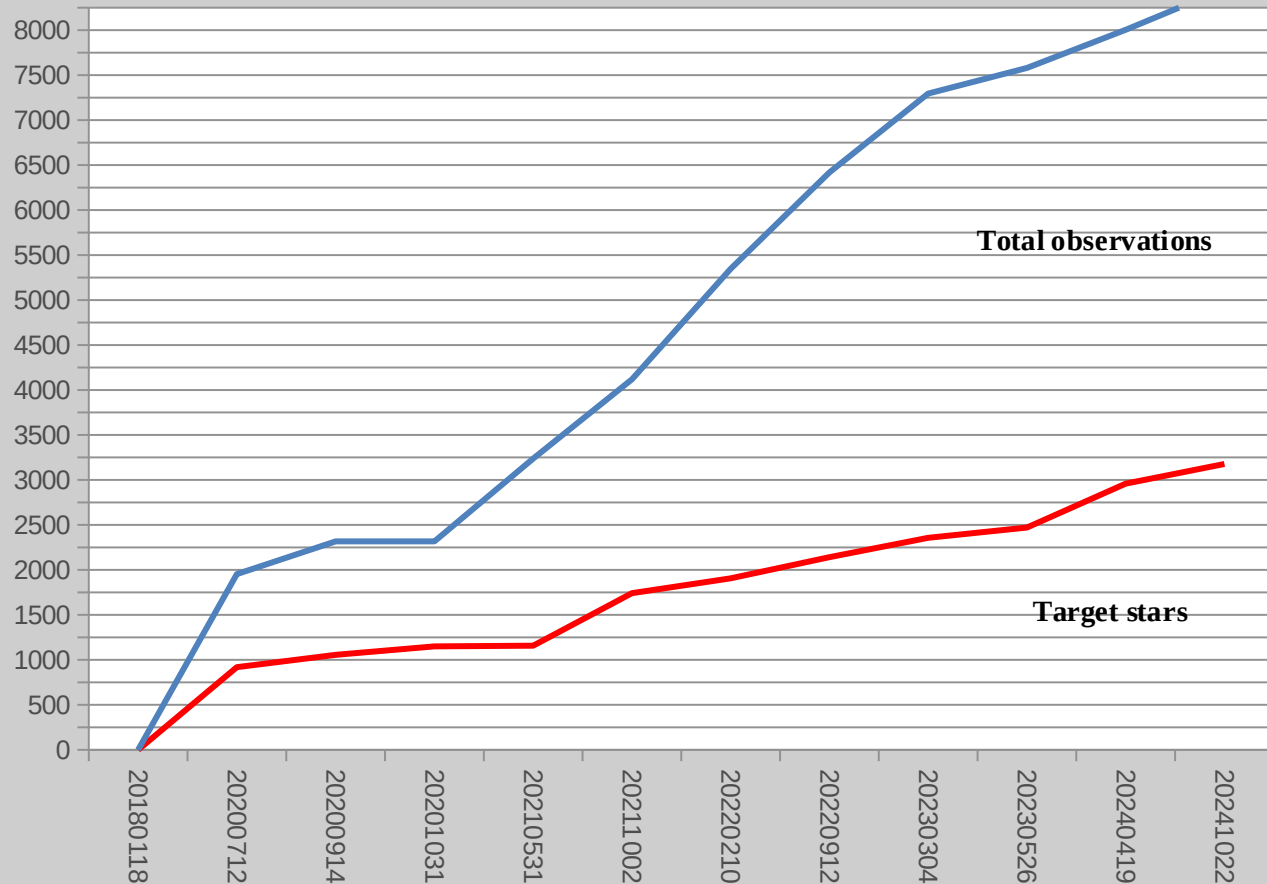
Name	HD Name	Bayer id	Flamsteed id	SIMBAD	RA (degree)	Dec (degree)	RA	Dec	V?	Spec. Type?	Date	Time	Obs. CODE	Sci File
-	HD37020	tet01 Ori A	41 Ori A	view	83.81594	-5.38731	05 35 15.825	-05 23 14.33	6.73	B0V C 1977ApJS...34..115W	2018-01-29	20:34:53	TOB-1	Avi file
Rigel	HD34085	bet Ori A	19 Ori	view	78.63447	-8.20164	05 14 32.272	-08 12 05.90	0.13	B8Iae C 1943ApJ...98..153M	2018-01-29	20:28:54	TOB-1	Avi file
Castor B	HD60178	alf01 Gem	66 Gem B	view	113.65042	31.88849	07 34 36.100	+31 53 18.57	3.0	KA0hA2mA1IVs B 1995ApJS...99..135A	2018-01-29	21:36:19	TOB-1	Avi file
-	HD37020	tet01 Ori A	41 Ori A	view	83.81594	-5.38731	05 35 15.825	-05 23 14.33	6.73	B0V C 1977ApJS...34..115W	2018-01-29	20:33:32	TOB-1	Avi file
Pollux	HD62509	bet Gem	78 Gem	view	116.32896	28.02620	07 45 18.950	+28 01 34.32	1.14	K0IIIb B 1989ApJ...71..245K	2018-01-29	21:20:03	TOB-1	Avi file

By Observer Code

SASDABA search options: Object List, Date, Obs. Code, ID, (SIMBAD)

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OAG/SVO SASDABA DATA BASE DEVELOPMENT 2018-2024



OAG-SVO SASDABA PROJECT

SASDABA RESULTS / UPDATED 20250301

1. Data: 160 GB
2. Files: 13.000+ (AVI / SER/ FITS)
3. Spectroscopic images: 8500+
4. Stars: 3.200+ (Northern & Southern Hemispheres)
5. Total Observations Nights: 900+ (Average 40% year)
6. Survey Status: 100 % completed (+90° to -90° DEC :100%). December 2023 (SASDABA_R1)
7. Publications & technical support to observers
8. Meetings, Workshops and share information
9. New Programs: Variable Stars (V=7) / Planetary Nebulae
10. New Programs: Memorial Mc Lean Survey (V=3.5)

OAG-SVO SASDABA PROJECT

Multiple system Beta Tuc_SASDABA_Project.
C.Ryan (Australia): RC-10" f8+ SA-100+ASI-1600MMC
d= 4,1A/pix
Epoch: 20211113

Nomenclature T.Tobal (2021)

Beta-3_HD_3003

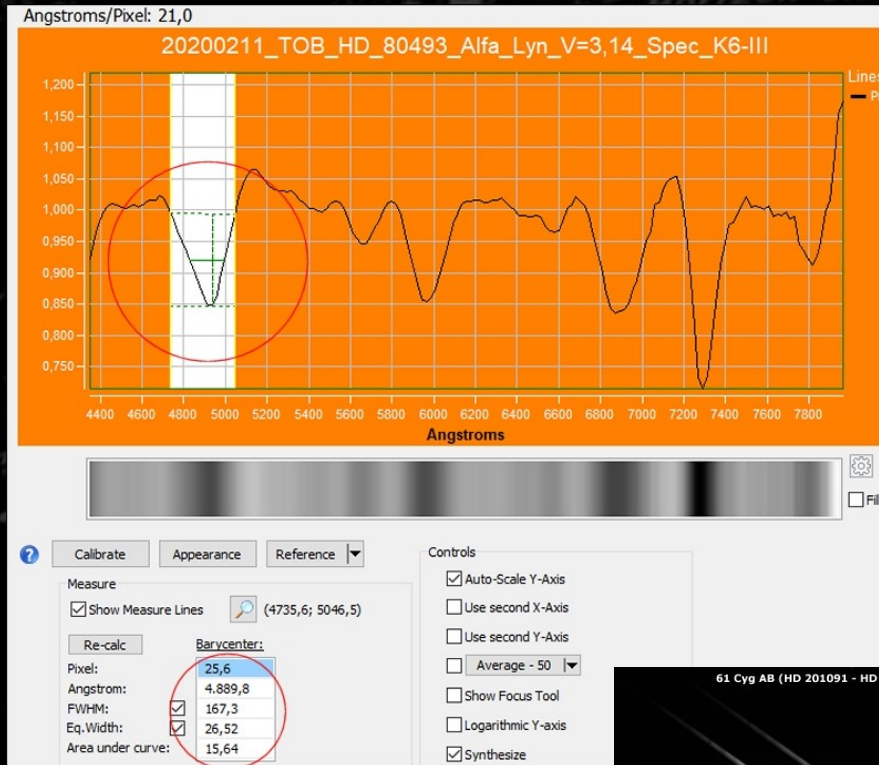
Beta-1_HD_2284

Beta-2_HD_2285

Beta-1: V= 4.36 Spec B9-IV (135 ly)
Beta-2: V= 4.68 Spec A2-IV (168 ly)
Beta-3: V= 5.07 Spec A1-IV (148 ly)

Beta_Tuc system with Star Analyser by C.Ryan from Australia

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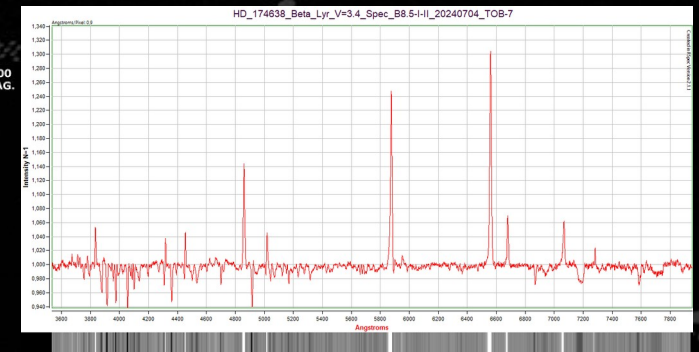
Excel Measurings_Barycenters - Microsoft Excel

Advertencia de seguridad Se han deshabilitado las conexiones de datos

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	PIX	λ BARIC	FWHM	EW	AUC	λ-1	λ-1									PIX	λ BARIC	FWHM	EW	AUC	λ-1	λ-1
2	124	2	3730	5	29	3	1	66	19	39	3709	0	3752	1	124	2	3730.5	29.3	1.66	19.4	3709.0	3752.1
3	165	9	3827	1	17	8	1	16	10	99	3814	1	3840	1	165	9	3827.1	17.8	1.16	11.0	3814.1	3840.1
4	183	3	3867	4	12	2	0	23	12	57	3853	2	3881	6	183	3	3867.4	12.2	0.23	12.6	3853.2	3881.6
5	212	1	3933	9	13	2	1	95	8	93	3923	5	3944	4	212	1	3933.9	13.2	1.95	8.93	3923.5	3944.4
6	227	4	3969	4	9	7	0	93	6	72	3962	0	3976	9	227	4	3969.4	9.7	0.93	6.72	3962.0	3976.9
7	273	1	4075	2	17	4	0	20	12	89	4063	9	4086	6	273	1	4075.2	17.4	0.20	12.9	4063.9	4086.6
8	287	9	4109	4	9	3	0	34	9	51	4102	1	4116	6	287	9	4109.4	9.3	0.34	9.51	4102.1	4116.6
9	309	8	4160	0	8	8	0	3	7	53	4153	6	4166	4	309	8	4160.0	8.8	0.03	7.53	4153.6	4166.4
10	331	8	4210	9	7	2	0	11	7	23	4205	2	4216	6	331	8	4210.9	7.2	0.11	7.23	4205.2	4216.6
11	344	6	4240	7	7	2	0	14	8	9	4233	9	4247	3	344	6	4240.7	7.2	0.14	8.09	4233.9	4247.3
12	365	0	4287	9	6	1	0	8	6	91	4282	9	4292	9	365	0	4287.9	6.1	0.08	6.91	4282.9	4292.9
13	378	4	4318	8	11	8	0	93	8	90	4309	7	4328	0	378	4	4318.8	11.8	0.93	8.9	4309.7	4328.0
14	395	1	4357	6	7	5	0	27	6	78	4351	1	4364	1	395	1	4357.6	7.5	0.27	6.78	4351.1	4364.1
15	414	0	4401	2	10	0	0	34	8	73	4392	4	4409	9	414	0	4401.2	10.0	0.34	8.73	4392.4	4409.9
16	422	7	4421	4	5	0	0	3	4	96	4417	5	4425	2	422	7	4421.4	5.0	0.03	4.96	4417.5	4425.2
17	437	7	4456	1	8	9	0	4	9	10	4448	4	4463	9	437	7	4456.1	8.9	0.04	9.1	4448.4	4463.9
18	447	1	4477	8	7	6	0	14	6	92	4471	6	4484	0	447	1	4477.8	7.6	0.14	6.92	4471.6	4484.0
19	478	8	4551	2	8	9	0	17	8	5	4544	1	4558	2	478	8	4551.2	8.9	0.17	8.05	4544.1	4558.2

SOLAR SPECTRUM Hoja3 Delta_Leo_BAR

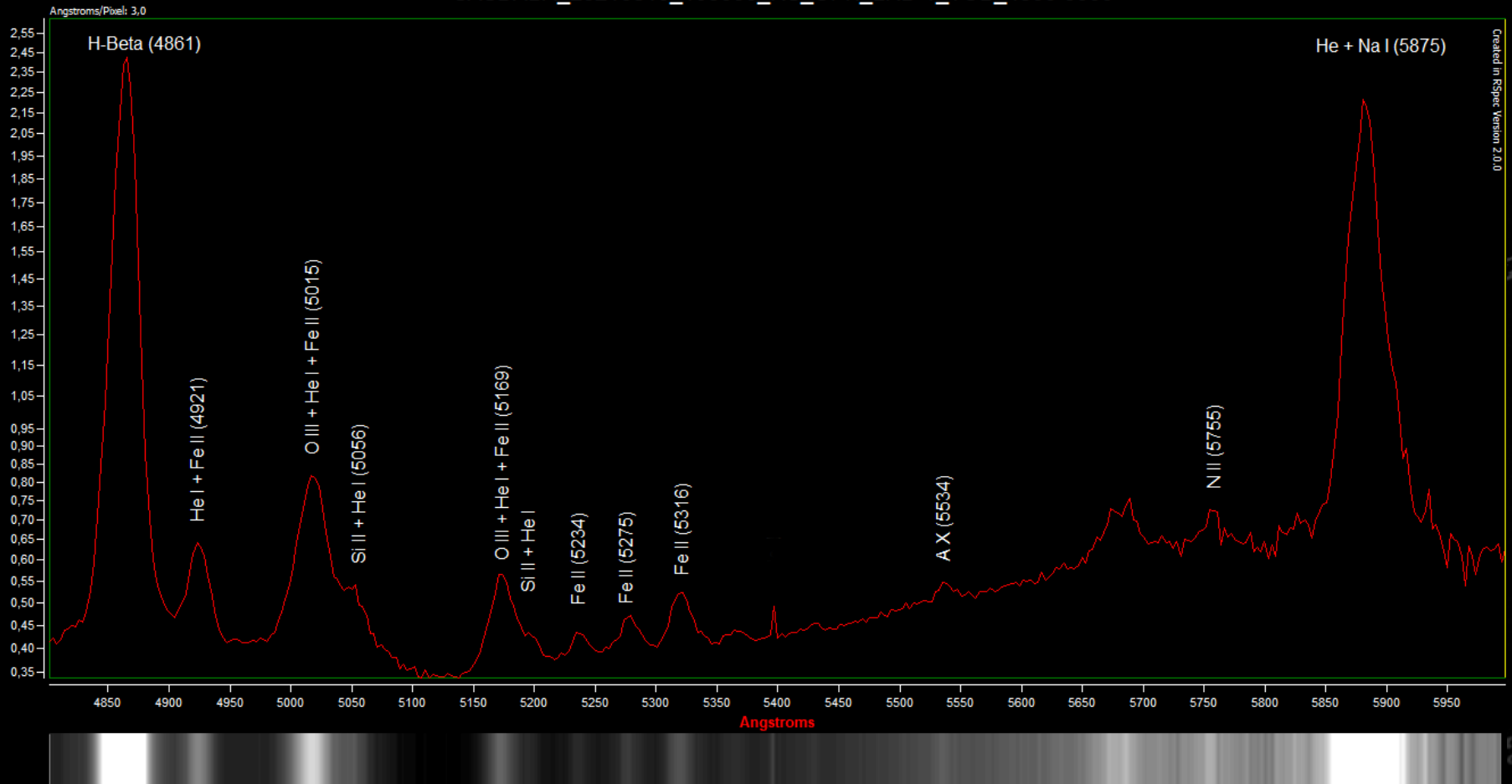
61 Cyg AB (HD 201091 - HD 201092). C-11+AS1 174MM+SA-100 20180725 .T.Tobal. OAG.



SASDABA allows a multitude of learning practices and subsequent analysis

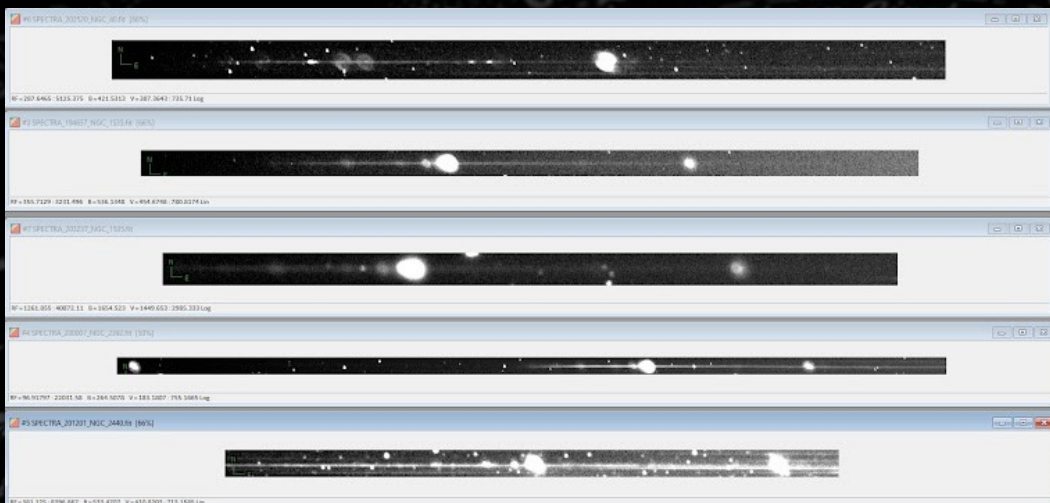
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SASDABA_20210819_195030_RS_OPH_LRD-1_TOB_4800-6000

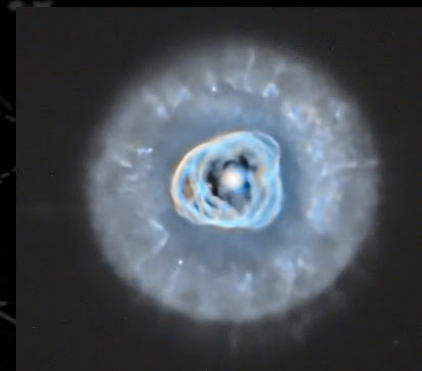


Processing stellar spectra (IIIb): Identification and labels

OAG-SVO SASDABA PROJECT



Star Analyser observations by J.A.Santiago



NGC 2392. IAC 80 by E.Matilla

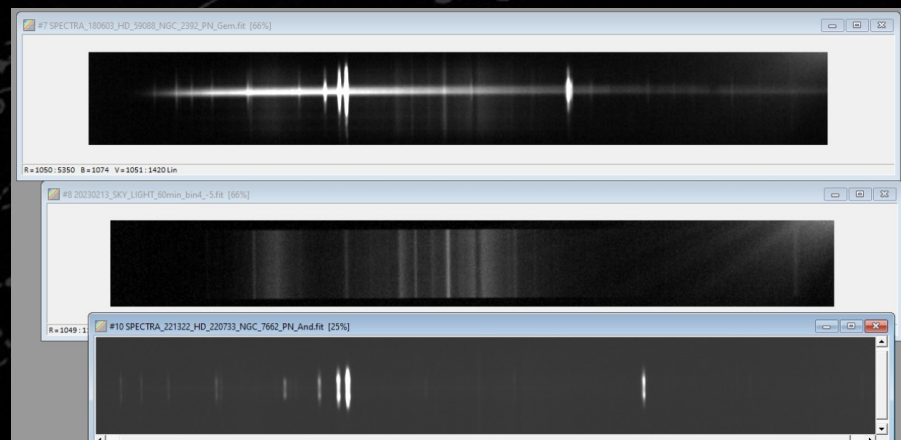


H α

NGC 6853 (M27)

OIII

L.Ribé



Spectrograph observations by T.Tobal

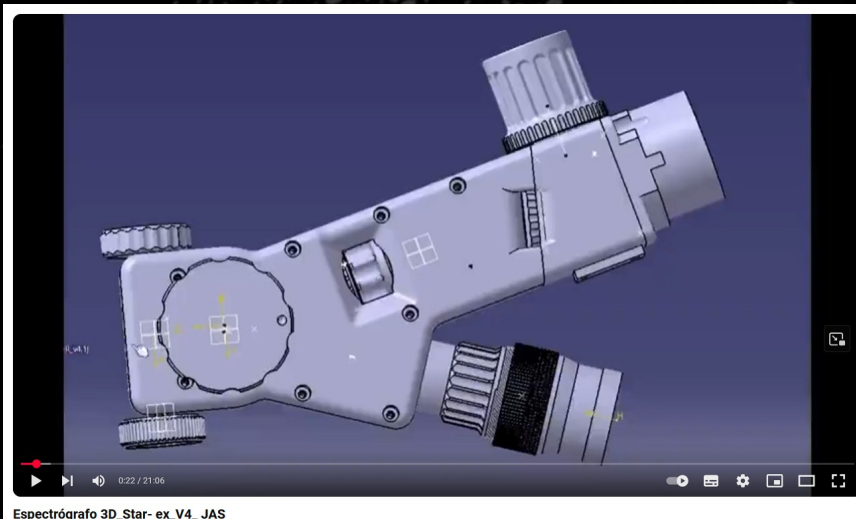
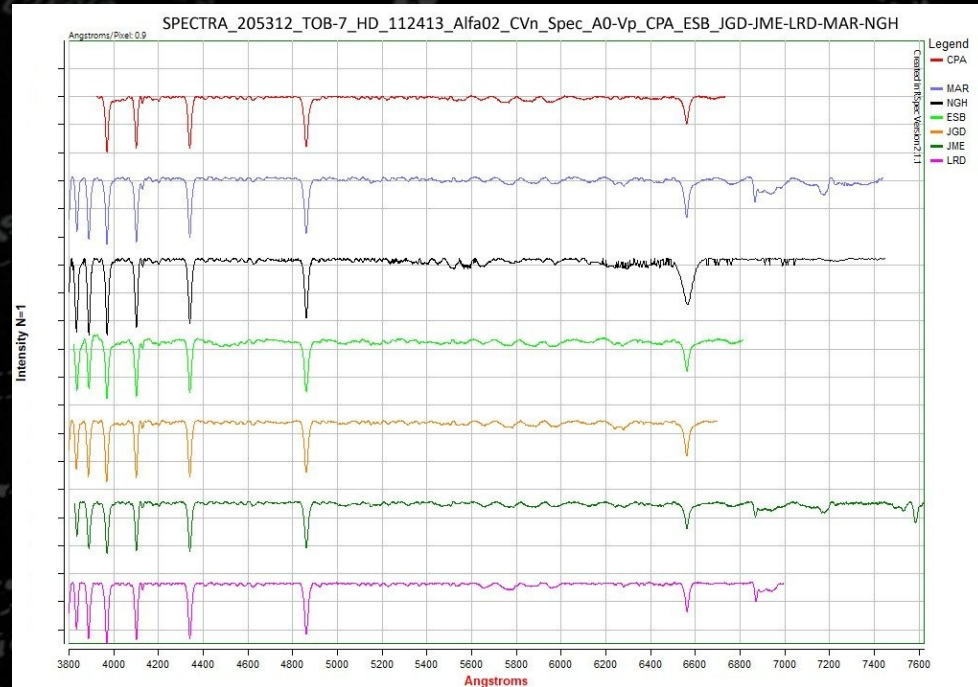
Planetary Nebulae observations: gratings, spectrographs and selective filters

OAG-SVO SASDABA PROJECT

The screenshot displays the SASDABA OAG-SVO website interface with several navigation panels:

- SASDABA OAG-SVO ...**: Main Learning Space
- INTRODUCTION TO S...**: Documents, sources, library
- TOOLS FOR SPECTR...**: Software, gratings, spectrographs...
- SASDABA ANALYSIS**: Examples, results, observation propos...
- SASDABA PROCESSI...**: Advanced projects in classification
- PLANETARY NEBULA...**: SASDABA Data_Base

Additional information includes a date "Due tomorrow" and a file name "20250128_Práctica_ERP_03_HD_62509_Bet..."



The image shows the YouTube channel page for "OAG_SASDABA_CLASSROOM_Astronomical Spectroscopy". The channel has 40 subscribers and 13 videos. The description states: "Este canal está dedicado a la publicación de los tutoriales y material complementario de...more". The channel URL is "oagarraf.net".

The "For you" section displays several video thumbnails:

- 09 Tutorial**: Astronomical Spectroscopy Online Du: 19:25
- 01 Tutorial**: Astronomical Spectroscopy Online Du: 23:45
- 06 Tutorial**: Astronomical Spectroscopy Online Du: 1:31:46

Below the thumbnails, there are links to other content: "Measurement of parameters with RSpec | Session 09 | SASDABA Project", "Introduction to SVO-SASDABA Database | Session 01 | SASDABA Project", "Star-ex_V4_JAS / 3D_Spectrograph", and "Extraction of the continuum with I | SASDABA Project".

SASDABA CLASSROOM Virtual Learning Space, it's free and open for everyone

OAG-SVO SASDABA PROJECT

COORDINATION MEMBERS

Member	Team	Location	Task
T.Tobal	OAG	Barcelona (Spain)	Coordination-Am Project
A.G.Santiago	OAG	Córdoba (Spain)	Support to Coordination Am
J.M.Espinosa	OAG	Cádiz (Spain)	Support SASDABA_Classroom
E.Solano	SVO-CAB-CSIC	Madrid (Spain)	Coordination-Pro Project
J.M.Alacid (2019-2020)	SVO-CAB-CSIC	Madrid (Spain)	SASDABA Data Base
A.Garcia (2020-2024)	SVO-CAB-CSIC	Madrid (Spain)	SASDABA Data Base
J.Cairol	OAG / ISHS	Brisbane (Australia)	Didactic / Documentation
R.Hernández	AAM / UPM	Madrid (Spain)	Documentation / Applications



Observación espectroscópica

Miguel Rodríguez Marco



Marcombo

➤ Observers and Collaborating Members (2018-2025):

M.A.Almela, S.Blázquez, R.Castillo, A.Castro, D.Cejudo, L.M. Domínguez, J.M. Espinosa, S.Kerr, E.Matilla, J.Marco, V.Mateos, X.Miret, J.J.Pueyo, M. Rodríguez, L.Romero, C.Ryan, L.Ribé, A.G.Santiago, A.Sánchez, T.Tobal, J.West.

OAG-SVO SASDABA PROJECT

The SASDABA Archive is part of the Spanish Virtual Observatory project (<https://svo.cab.inta-csic.es>) funded by MCIN/AEI/10.13039/501100011033 through grant PID2023-146210NB-I00

This research used of "Aladin Sky Atlas" developed at CDS, Strasbourg Observatory, France → [2000A&AS..143...33B](#) and [2014ASPC..485..277B](#).

The DASCH project at Harvard is grateful for partial support from NSF grants AST-0407380, AST-0909073, and AST-1313370

SASDABA website: <https://sdc.cab.inta-csic.es/sasdaba/>

OAG website: www.oagarraf.net

Project contact: informaciooag@gmail.com

Acknowledgements: to [Còsmik_SL](#) and [Astronscientific](#) for their providing us with the necessary equipment. To T. Field for his support in the RSpec software. To J.A.Soldevilla, A.Sánchez for their maintenance work in OAG Stations., and to D.Valls (Obs París-Meudon) and J.Fabregat (UV) for his support.



OAG-SVO SASDABA PROJECT

by T.Tobal and E.Solano

March 2025