



The CARMENES GTO Archive

(<http://carmenes.cab.inta-csic.es>)



CENTRO DE ASTROBIOLOGÍA
ASOCIADO AL NASA ASTROBIOLOGY INSTITUTE



CSIC



EXCELENCIA
MARÍA DE
MAEZTU

Enrique Solano
CAB (CSIC-INTA)

The GTO Archive: Overview



- Where is the archive physically located?
 - Madrid. Centro de Astrobiología (CAB)



- Why at CAB?

CAB hosts the Calar Alto Archive.

Reference centre for VO activities in Spain.



A screenshot of the Spanish Virtual Observatory (SVO) website. The header reads "Spanish Virtual Observatory". Below the header, there are four main sections: "The SVO" (with a photo of the team), "The CAB Scientific Data Centre GTC Archive" (with links to Calar Alto, DUNES, CORDT, and DSS-63), "Theoretical Data Server" (with links to Stellar Spectra theoretical models, Evolutionary Synthesis Models, and Observational templates), and "Services" (with links to VOSA, VOSED, and TESELA). The footer includes logos for the Spanish Ministry of Science and Innovation, the European Space Agency, the Spanish National Research Council (CSIC), and the Euro VO.

- What does the GTO archive contain?
 - GTO raw, associated calib. files and reduced data

Data transfer and ingestion



- Private ftp
- Daily sinchro
- @12:00 PM

```
—processed_240216.txt—
car-20160223T15h17m06s-sci-gtoc-vis.fits
car-20160223T15h17m44s-sci-gtoc-vis.fits
car-20160223T15h18m22s-sci-gtoc-vis.fits
car-20160223T15h18m00s-sci-gtoc-vis.fits
```



CAHA



Consortium



Guaranteed Time Observations (GTO) Data Archive

Target query Identifier/coordinates/list (?)

Search radius [arcsec]

Night query Date from to Image type (?) sci

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CAB



The Archive: Entry page



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CARMENES data archive

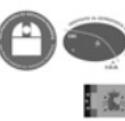
Ground-based detection of an extended helium atmosphere in the Saturn mass planet WASP-69b
(Nortmann et al. 2018 Science, 362, 1388)

The CARMENES search for exoplanets around M dwarfs. Optical and near-infrared spectroscopy of 324 survey stars
(Reiners et al. 2018 A&A, 612, A49)

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The CARMENES search for exoplanets around M dwarfs.
Optical and near-infrared spectroscopy of 324 survey stars
(Reiners et al. A&A, 612, A49)
[Readme](#)

[Download all spectra \(~1.7GB\)](#)

Karmn	Date	VIS			NIR			H α +CaI
		Spectrum	Exp time	SNR	Spectrum	Exp time	SNR	
J00051+457	2016-09-14 01:50:27	VIS	1800	67	NIR	1793	126	png
J00067-075	2016-11-18 17:55:39	VIS	1238	64	NIR	1230	123	png
J00162+198E	2016-10-11 00:21:30	VIS	1644	52	NIR	1636	126	png
J00183+440	2016-11-18 18:27:54	VIS	61	68	NIR	53	121	png
J00184+440	2016-11-10 21:04:31	VIS	198	54	NIR	191	122	png
J00286-066	2016-10-14 23:05:21	VIS	909	47	NIR	902	58	png
J00389+306	2016-08-07 04:03:24	VIS	1200	147	NIR	1194	77	png
J00570+450	2016-11-13 21:19:17	VIS	919	59	NIR	910	126	png
J01013+613	2016-07-24 04:16:21	VIS	853	70	NIR	846	126	png
J01019+541	2017-10-13 22:52:42	VIS	1801	48	NIR	1793	78	png
J01025+716	2016-01-13 19:14:17	VIS	650	171	NIR	650	162	png
J01026+623	2016-01-13 18:24:54	VIS	700	182	NIR	700	193	png
J01033+623	2017-03-09 19:28:57	VIS	1802	51	NIR	1793	80	png
J01048-181	2017-10-31 22:09:30	VIS	1801	56	NIR	1793	74	png
J01125-169	2016-09-01 02:51:31	VIS	442	53	NIR	437	79	png
J01339-176	2017-10-15 00:21:05	VIS	1802	58	NIR	1793	124	png
J01352-072	2016-11-10 22:17:50	VIS	1720	49	NIR	1712	122	png
J01433+043	2016-10-30 23:04:55	VIS	365	67	NIR	358	118	png

The Archive: Entry page



Your Logo

Mjölnir



Results

Total results: 148

RA (J2000)?	Dec (J2000)?	2MASS Name?	Simbad Name?	SpT?		Date Obs.?	T. exp. (s)?	Jmag?	Jmag_source?	Flag?	VIS <input checked="" type="checkbox"/>	
				Value	Ref						Header	File
4.594000	44.022833	J00182256+4401222	GXAnd	M1.0V	-	2016-11-10	300	5.2520	2MASS_PSC	-	Header	Download
10.205375	40.187028	J00404929+4011133	HD3765	K2V	-	2016-06-14	400	5.6940	2MASS_PSC	-	Header	Download
12.275917	57.815139	J00490622+5748545	eta Cas	G3V	-	2016-06-14	60	2.3600	Vizier_II/7A/catalog	1?	Header	Download
17.066542	54.920778	J01081597+5455148	mu Cas	G5Vb	-	2016-06-14	200	4.0300	Simbad	-	Header	Download
37.972417	57.697639	J02315338+5741515	V425Per	B6Ia	-	2016-10-27	90	5.3700	2MASS_PSC	-	Header	Download
38.205833	61.378333	J02324940+6122420	HD15570	O4Iab/I	-	2016-10-27	260	6.4770	2MASS_PSC	-	Header	Download
42.949208	57.048500	J02514781+5702546	HD17603	O7.5Ib	-	2016-10-27	380	7.0420	2MASS_PSC	-	Header	Download
52.478083	58.878722	J03295474+5852434	CECam	A0Ia	-	2016-10-27	120	3.2100	Vizier_II/237_colors	-	Header	Download

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Ground-based detection of an extended helium atmosphere in the Saturn mass planet WASP-69b
(Nortmann et al. 2018 Science, 362, 1388)

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The Archive: Query Form

Ground-based detection of an extended helium atmosphere in the Saturn mass planet WASP-69b
 (Nortmann et al. 2018 Science, 362, 1388)

The CARMENES search for exoplanets around M dwarfs. Optical and near-infrared spectroscopy of 324 survey stars
 (Reiners et al. 2018 A&A, 612, A49)

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logged
as esm

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Guaranteed Time Observations (GTO)

Search by target

Identifier/coordinates

- Carmenes ID. Eg: J01025+716
- Coordinates: RAJ2000(deg)
DEJ2000(deg). Eg: 1.2990 45.785

Search radius

Search by date

Date from to

Category? Sci Cal Acg Misc Tst Sci-no-GTO

Channel VIS NIR

Object?

The Archive: Results



carmenes

CARMENES data archive

Results

Number of results found: 1

[Retrieve Marked Data](#)

Karmn?	Category	RAJ2000 (deg)	DEJ2000 (deg)	VIS <input type="checkbox"/>	NIR <input type="checkbox"/>	A&G <input type="checkbox"/>	Templates
J00051+457	sci	1.29908	45.78583	View Download <input type="checkbox"/>	View Download <input type="checkbox"/>	View Download <input type="checkbox"/>	VIS NIR



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The Archive: Results



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CARMENES data archive

Results

Number of results found: 1

Retrieve Marked Data

Authentication Required

 https://carmenes.caha.es is requesting your username and password. The site says: "ONLY FOR AUTHENTICATED USERS"

User Name:	<input type="text" value="carmenes-int"/>
Password:	<input type="password" value="*****"/>

→

Karmn?	Category	RAJ2000 (deg)	DEJ2000 (deg)	VIS <input type="checkbox"/>	NIR <input type="checkbox"/>	A&G <input type="checkbox"/>	Templates
J00051+457	sci	1.29908	45.78583	View Download <input type="checkbox"/>	View Download <input type="checkbox"/>	View Download <input type="checkbox"/>	VIS NIR



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The Archive: Results



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Public

Private

GTO Targets

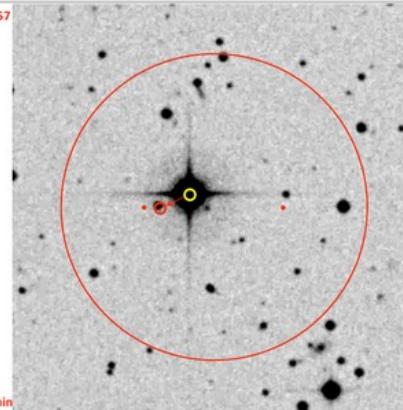
GTO Archive

J00051+457 | GJ 2 | M1.0 V

• Key data

#Karmn	J00051+457	
Name	GJ 2	
SpT	M1.0 V	PMSU
J_mag	6.704	0.021
RA_J2000	00:05:10.78	2M
DE_J2000	+45:47:11.6	
vsini_kms-1	2.0	Rein17

J00051+457



4 x 4 arcmin

• Stellar Parameters

Teff_K	3.675e+03	5.100e+01
logg	4.840e+00	7.000e-02
[Fe/H]	-1.600e-01	1.600e-01
L_Lsol	0.043410	0.000858
R_Rsol	0.5138	0.0193
M_Msol	0.5181	0.0368

• Activity

The Archive: Results



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CARMENES data archive

Results

Number of results found: 1

[Retrieve Marked Data](#)



Karmn?	Category	RAJ2000 (deg)	DEJ2000 (deg)	VIS <input type="checkbox"/>	NIR <input type="checkbox"/>	A&G <input type="checkbox"/>	Templates
J00051+457	sci	1.29908	45.78583	View Download <input type="checkbox"/>	View Download <input type="checkbox"/>	View Download <input type="checkbox"/>	VIS NIR



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The Archive: Results



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CARMENES data archive

Results

Number of results found: 1

Retrieve Marked Data



Karmn?	Category	RAJ2000 (deg)	DEJ2000 (deg)	VIS <input type="checkbox"/>	NIR <input type="checkbox"/>	A&G <input type="checkbox"/>	Templates
J00051+457	sci	1.29908	45.78583	View Download <input type="checkbox"/>	View Download <input type="checkbox"/>	View Download <input type="checkbox"/>	VIS NIR



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The Archive: Results



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CARMENES data archive

Results

Number of results found: 51

[Retrieve Marked Data](#)

J00051+457

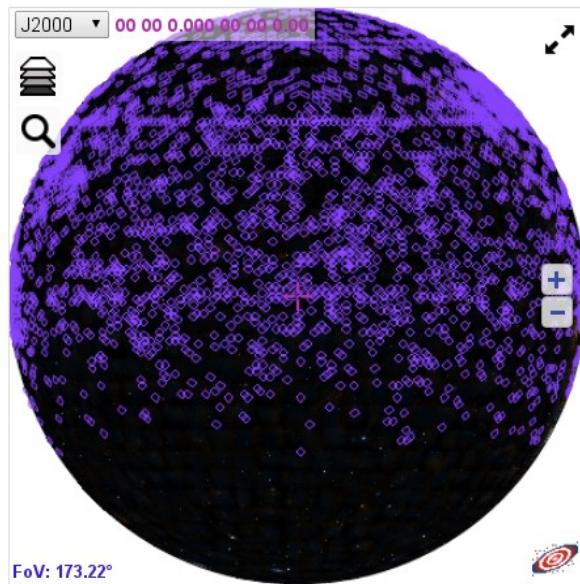
Category	Channel	Observing date	Release date	Exposure time (s)	Airmass?	Telluric correction <input type="checkbox"/>	Reduced data A? <input type="checkbox"/>	Reduced data B? <input type="checkbox"/>	Raw data <input type="checkbox"/>	Calibration data <input type="checkbox"/>
sci	vis	2017-12-05 23:49:14	2020-12-04 23:49:14	945	1.561	Not avail.	Not avail.	Download <input type="checkbox"/> Header <input type="checkbox"/>	Download <input type="checkbox"/> Header <input type="checkbox"/>	View <input type="checkbox"/>
sci	vis	2017-11-02 21:05:46	2020-11-01 21:05:46	801.5	1.014	Not avail.	Not avail.	Download <input type="checkbox"/> Header <input type="checkbox"/>	Download <input type="checkbox"/> Header <input type="checkbox"/>	View <input type="checkbox"/>
sci	vis	2017-11-01 22:17:21	2020-10-31 22:17:21	589.8	1.023	Not avail.	Not avail.	Download <input type="checkbox"/> Header <input type="checkbox"/>	Download <input type="checkbox"/> Header <input type="checkbox"/>	View <input type="checkbox"/>
sci	vis	2017-10-31 21:56:53	2020-10-30 21:56:53	473.5	1.014	Not avail.	Not avail.	Download <input type="checkbox"/> Header <input type="checkbox"/>	Download <input type="checkbox"/> Header <input type="checkbox"/>	View <input type="checkbox"/>
sci	vis	2017-10-03 22:50:15	2020-10-02 22:50:15	721.3	1.018	Not avail.	Not avail.	Download <input type="checkbox"/> Header <input type="checkbox"/>	Download <input type="checkbox"/> Header <input type="checkbox"/>	View <input type="checkbox"/>
sci	vis	2017-09-13 00:17:20	2020-09-12 00:17:20	839.5	1.017	Not avail.	Not avail.	Download <input type="checkbox"/> Header <input type="checkbox"/>	Download <input type="checkbox"/> Header <input type="checkbox"/>	View <input type="checkbox"/>

The Calar Alto archive



Calar Alto Archive: Search Form

CAHA footprint MOC:



Search by date:

Between: 21 January 2008
And: 16 February 2018

Search by Instrumentation:

<input type="checkbox"/> 2.2m Telescope : Imaging: BUSCA <input type="checkbox"/> Raw <input type="checkbox"/> Advanced Data Products (more info...) CAFOS <input type="checkbox"/> Raw <input type="checkbox"/> Advanced Data Products MAGIC <input type="checkbox"/> Raw ASTRALUX <input type="checkbox"/> Raw	<input type="checkbox"/> 3.5m Telescope : Spectroscopy: CAFOS <input type="checkbox"/> Raw FOCES <input type="checkbox"/> Raw CAFE <input type="checkbox"/> Raw	 Spectroscopy: Omega 2000 <input type="checkbox"/> Raw <input type="checkbox"/> Advanced Data Products LAICA <input type="checkbox"/> Raw MOSCA <input type="checkbox"/> Raw <input type="checkbox"/> Advanced Data Products	 Spectroscopy: TWIN <input type="checkbox"/> Raw MOSCA <input type="checkbox"/> Raw PMAS <input type="checkbox"/> Raw CARMENES <input checked="" type="checkbox"/> Raw <input checked="" type="checkbox"/> Reduced Products
--	--	---	--

Number of Results per Page: 10

Page to show: 1

Order by: Caha_id

Download MOC

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
(decimal degrees)

Search radius:

The Calar Alto Archive



CAHA: Results

Total results: 7921

CAHA_ID	OBJECT	RA (deg)	DEC (deg)	Telescope	Instrument	Type	Filter	Grism/Grating	Central λ (nm)	Res./Disp. ?	ObsDate	ObsTime	ExpTime (s)	Airmass		Raw Data			Advance view	
														begin	end	Science Data	Calibration Data			
↑ ↓	↑ ↓	↑ ↓	↑ ↓	↑ ↓	↑ ↓	↑ ↓	↑ ↓	↑ ↓	↑ ↓	↑ ↓	↑ ↓	↑ ↓	↑ ↓	↑ ↓	↑ ↓	↑ ↓	view	fetch <input checked="" type="checkbox"/>	fetch <input checked="" type="checkbox"/>	View
245795	2MUCD 20699	256.4514	-5.2795	CA-3.5	CARMENES	SPEC	-	vis	N/A	N/A	2016-06-02	01:35:49	1800.0	1.41	-	Header	-	FITS <input checked="" type="checkbox"/>	FILES <input checked="" type="checkbox"/>	View
245796	J23064-050	346.6220	-5.0413	CA-3.5	CARMENES	SPEC	-	vis	N/A	N/A	2016-06-02	03:20:39	600.0	2.10	-	Header	-	FITS <input checked="" type="checkbox"/>	FILES <input checked="" type="checkbox"/>	View
245797	J23064-050	346.6220	-5.0413	CA-3.5	CARMENES	SPEC	-	vis	N/A	N/A	2016-06-02	03:09:59	600.0	2.23	-	Header	-	FITS <input checked="" type="checkbox"/>	FILES <input checked="" type="checkbox"/>	View
245798	2MUCD 20699	256.4514	-5.2795	CA-3.5	CARMENES	SPEC	-	vis	N/A	N/A	2016-06-02	00:33:16	1800.0	1.36	-	Header	-	FITS <input checked="" type="checkbox"/>	FILES <input checked="" type="checkbox"/>	View
245799	J23064-050	346.6220	-5.0413	CA-3.5	CARMENES	SPEC	-	vis	N/A	N/A	2016-06-02	03:31:18	600.0	1.99	-	Header	-	FITS <input checked="" type="checkbox"/>	FILES <input checked="" type="checkbox"/>	View
245800	2MUCD 11291	226.7267	13.3517	CA-3.5	CARMENES	SPEC	-	vis	N/A	N/A	2016-06-01	23:18:42	1800.0	1.11	-	Header	-	FITS <input checked="" type="checkbox"/>	FILES <input checked="" type="checkbox"/>	View
245801	2MUCD 11291	226.7267	13.3517	CA-3.5	CARMENES	SPEC	-	vis	N/A	N/A	2016-06-01	22:46:28	1800.0	1.10	-	Header	-	FITS <input checked="" type="checkbox"/>	FILES <input checked="" type="checkbox"/>	View
245802	2MUCD 20699	256.4514	-5.2795	CA-3.5	CARMENES	SPEC	-	vis	N/A	N/A	2016-06-02	01:05:09	1800.0	1.37	-	Header	-	FITS <input checked="" type="checkbox"/>	FILES <input checked="" type="checkbox"/>	View
245803	J23064-050	346.6220	-5.0413	CA-3.5	CARMENES	SPEC	-	vis	N/A	N/A	2016-06-02	02:48:39	600.0	2.57	-	Header	-	FITS <input checked="" type="checkbox"/>	FILES <input checked="" type="checkbox"/>	View
245804	J17572+707 (LP 044-162)	269.3142	70.7003	CA-3.5	CARMENES	SPEC	-	vis	N/A	N/A	2016-06-02	02:12:59	1800.0	1.21	-	Header	-	FITS <input checked="" type="checkbox"/>	FILES <input checked="" type="checkbox"/>	View

page number: 1 of 793

[Next page](#)

[Retrieve Selected Data](#)

[Back to Search Form](#)

GTO Archive: Statistics



- > 1 702 619 downloaded files (> 700 000 science files)
- > 13 TB
- > 12 000 NIR A/ B – VIS A/B files



Final reminder



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CARMENES data archive

Ground-based detection of an extended helium atmosphere in the Saturn mass planet WASP-69b
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Final reminder



ACKNOWLEDGEMENTS

CARMENES is an instrument for the Centro Astronómico Hispano-Alemán de Calar Alto (CAHA, Almería, Spain).

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Institut de Ciències de l'Espai,

Institut für Astrophysik Göttingen,

Universidad Complutense de Madrid,

Thüringer Landessternwarte Tautenburg,

Instituto de Astrofísica de Canarias,

Hamburger Sternwarte,

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[Based on data from the CARMENES data archive at CAB (INTA-CSIC).] 

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Final reminder


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QUICK FIELD: Author First Author Abstract Year Fulltext All Search Terms

(title:"CARMENES" AND year:2017-2019)



Your search returned 17 results



Date ▾

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Collection
+astronomy

Property
+property:refereed

✓ AUTHORS

- > Amado, P 16
- > Caballero, J 16
- > Quirrenbach, A 16
- > Reiners, A 16
- > Ribas, I 16

[more](#)

✓ COLLECTIONS

- astronomy 17

✓ REFEREED

- < refereed 17

✓ AFFILIATIONS

✓ KEYWORDS

✓ PUBLICATIONS

✓ BIB GROUPS

✓ SIMBAD OBJECTS

✓ NED OBJECTS

✓ DATA

✓ VIZIER TABLES

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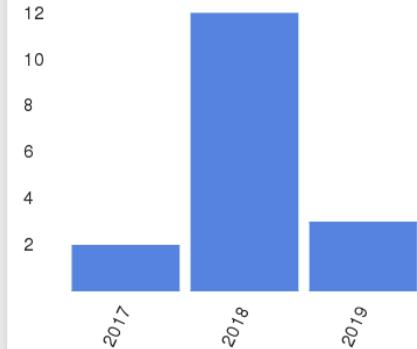
[Go To Bottom](#)

- 1 2019A&A...621A.126D 2019/01 cited: 5
CARMENES input catalogue of M dwarfs. IV. New rotation periods from photometric time series
Diez Alonso, E.; Caballero, J. A.; Montes, D. [and 21 more](#)
- 2 2019A&A...621A..74A 2019/01
Multiple water band detections in the CARMENES near-infrared transmission spectrum of HD 189733 b
Alonso-Floriano, F. J.; Sánchez-López, A.; Snellen, I. A. G. [and 27 more](#)
- 3 2019A&A...621A..49C 2019/01
Confirmation of the radial velocity super-Earth K2-18c with HARPS and CARMENES
Cloutier, R.; Astudillo-Defru, N.; Doyon, R. [and 13 more](#)
- 4 2018A&A...620A.171L 2018/12 cited: 2
The CARMENES search for exoplanets around M dwarfs. The warm super-Earths in twin orbits around the mid-type M dwarfs Ross 1020 (GJ 3779) and LP 819-052 (GJ 1265)
Luque, R.; Nowak, G.; Pallé, E. [and 27 more](#)
- 5 2018A&A...620A..97S 2018/12 cited: 5
Detection of He I λ 10830 Å absorption on HD 189733 b with CARMENES high-resolution transmission spectroscopy
Salz, M.; Czesla, S.; Schneider, P. C. [and 35 more](#)
- 6 2018A&A...619A..32B 2018/11 cited: 2
The CARMENES search for exoplanets around M dwarfs. Nine new double-line spectroscopic

0 selected

Years Citations Reads

refereed non refereed



Limit results to papers from

2017 to 2019

Apply

- CARMENES archive in text: 3
- Acknowledgement: 1