



Science-ready data in the GTC and Calar Alto Archives

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The **Gran Telescopio Canarias (GTC)** and the **Calar Alto (CAHA) archives** have been developed in the framework of the Spanish Virtual Observatory (SVO) and are maintained by the Data Archive Unit at Centro de Astrobiología (CAB).

The archives contain both raw and science ready data, and have been designed in compliance with the standards defined by International Virtual Observatory Alliance (**IVOA**) which makes their contents fully findable, accesible and interoperable.

Science-ready data products are of fundamental importance for archives as they enhance their use by the community and for the astronomical community as they allow to conduct research projects that would otherwise be very time-consuming or completely unaffordable.



Science-ready data at the GTC archive

(<http://gtc.sdc.cab.inta-csic.es/gtc/>)
In operation since November 2011.



The Gran Telescopio CANARIAS Public Archive

This data server provides access to the GTC Public Archive. GTC data become public once the proprietary (1 year) is over. The Gran Telescopio CANARIAS (GTC), is a 10.4m telescope with a segmented primary mirror. It is located in one of the top astronomical sites in the Northern Hemisphere: the Observatorio del Roque de los Muchachos (ORM, La Palma, Canary Islands). The GTC is a Spanish initiative led by the Instituto de Astrofísica de Canarias (IAC). The project also includes the participation of Mexico (Instituto de Astronomía de la Universidad Nacional Autónoma de México (IA-UNAM) and Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE)) and the US (University of Florida (UFL)). The project is actively supported by the Spanish Government and the Local Government from the Canary Islands through the European Funds for Regional Development (FEDER) provided by the European Union.

Resources

- ▶ Archive search and data retrieval
- ▶ News
- ▶ System Overview
- ▶ Frequently Asked Questions
- ▶ Help Desk (gtc-support@cab.inta-csic.es)

- ▶ High Level Data Collections
- ▶ OSIRIS BBI detection catalogue. DR1 (2009-2014)
- ▶ OSIRIS BBI source catalogue. DR1 (2009-2014)

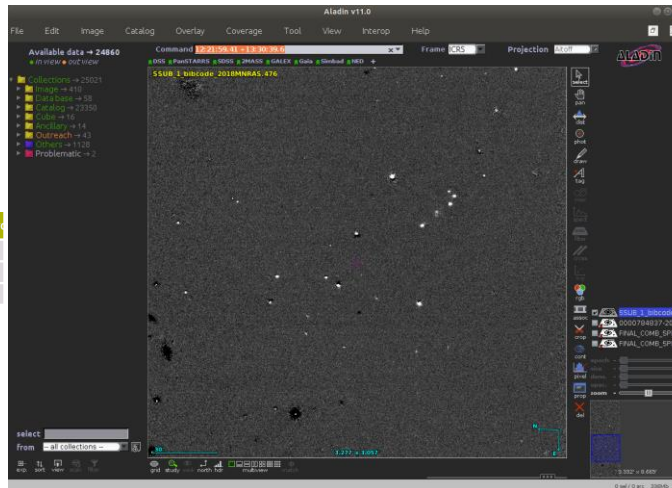
Three different types of science-ready data at the GTC archive:

I: Science-ready data provided by the community

On a monthly basis, GTC archive staff looks for refereed publications containing GTC data. Once identified the first author is contacted and invited to send us the reduced data used in the paper. The author can upload their science-ready data using an ingestion application developed to facilitate this process.



Prod ID	Program ID	O.Block	Object	RA (deg) J2000	DEC (deg) J2000	RA J2000 (hh:mm:ss.ss)	DEC J2000 (dd:mm:ss.s)	Instr.	Obs. Mode	Pub	User Reduced Data ?	GTC
1949286	GTC14-19A7	0006C	SDSS1138+4732	174.64153	47.55755	11:38:33.97	47:33:27.2	EMIR	BBI?	1	ADS View Fetch	
1949285	GTC14-19A7	0006C	SDSS1138+4732	174.64153	47.55755	11:38:33.97	47:33:27.2	EMIR	BBI?	1	ADS View Fetch	
1949283	GTC14-19A7	0006C	SDSS1138+4732	174.64308	47.55497	11:38:34.34	47:33:17.9	EMIR	BBI?	1	ADS View Fetch	



Number of refereed papers using GTC data:	460
Number of refereed papers with science-ready data in the GTC archive:	136
Number of science-ready data files in the GTC archive:	11 311



II) Science-ready data provided by the GTC archive staff. (OSIRIS) Cortés-Contreras et al. (2020MNRAS.491..129C). Include 6788 broad-band images in the Sloan griz filters obtained between April 2009 and January 2014.



12 Products found matching your criteria

Download selected in zip format

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Prod ID	Program ID	O.Block	Object	RA (deg) J2000	DEC (deg) J2000	RAJ2000 (hh:mm:ss.ss)	DECJ2000 (dd:mm:ss.ss)	Instr.	Obs. Mode	Pub	User Reduced Data ?	GTC Reduced Data ?	QLA Reduced Data ?
631624	GTC31-13B?	0006	GRB080430-g	165.41488	51.68739	11:01:39.57	51:41:14.6	OSIRIS	BBI?	1		Header Preview Fetch	
631623	GTC31-13B?	0006	GRB080430-g	165.41046	51.68322	11:01:38.51	51:40:59.6	OSIRIS	BBI?	1		Header Preview Fetch	
631622	GTC31-13B?	0006	GRB080430-g	165.41535	51.67939	11:01:39.68	51:40:45.8	OSIRIS	BBI?	1		Header Preview Fetch	

III) Quick Look Analysis reduced data. (EMIR, MEGARA, HORuS)

- Help the user to understand the data but they may not be valid for scientific analysis.
- Obtained after the automated reduction of the following pipelines:
 - **HORuS chain:** <https://github.com/callendeprieto/chain>
 - **Megara_drp:** <https://github.com/guaix-ucm/megaradrp>
 - **PyEmir:** <https://pyemir.readthedocs.io/en/latest/index.html>

Prod ID	Program ID	O.Block	Object	RA (deg) J2000	DEC (deg) J2000	RAJ2000 (hh:mm:ss.ss)	DECJ2000 (dd:mm:ss.ss)	Instr.	Obs. Mode	Pub	User Reduced Data ?	GTC Reduced Data ?	QLA Reduced Data ?
2526260	GTC2-19BCNT?	0009	ID58	91.31464	23.41476	06:05:15.51	23:24:53.1	HORuS	SPE?	0			View Fetch
2525953	GTC5-19BFLO?	0035	2MASSJ17045729+3720576	256.20658	37.34565	17:04:49.58	37:20:44.4	HORuS	SPE?	0			View Fetch
2525937	GTC5-19BFLO?	0016	2MASSJ17041197+1626552	256.02215	16.44579	17:04:5.32	16:26:44.9	HORuS	SPE?	0			View Fetch

MNRAS 000, 1–?? (2019) Preprint 17 October 2019 Compiled using MNRAS L^AT_EX style file v3.0

The Gran Telescopio Canarias OSIRIS Broad Band First Data Release

M. Cortés-Contreras,^{1,2*} H. Bouy,³ E. Solano,^{1,2} M. Mahlke,^{1,2} F. Jiménez-Esteban,^{1,2} J.M. Alacid^{1,2} and C. Rodrigo^{1,2}

¹Departamento de Astrofísica, Centro de Astrobiología (CSIC-INTA), ESAC Campus, Camino Bajo del Castillo s/n E-28692 Villanueva de la Cañada, Madrid, Spain
²Spanish Virtual Observatory, Spain
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Accepted XXX. Received YYY; in original form ZZZ

ABSTRACT
 We present the first release of GTC OSIRIS Broad Band data archive. This is an effort conducted in the framework of the Spanish Virtual Observatory to help optimize science from the Gran Telescopio Canarias Archive. Data Release 1 includes 6788 broad-band images in the Sloan griz filters obtained between April 2009 and Jan-

HORuS chain

This an IDL/GDL pipeline for reducing the data from the HORuS spectrograph on the 10.4-m Gran Telescopio Canarias (GTC). HORuS is a high-resolution (R=25,000) wide-coverage (380-700 nm, with gaps in the red), fiber-fed, echelle spectrograph. HORuS had a previous life as the Utrecht Echelle Spectrograph (UES) on the 4.2-m William Herschel Telescope in La Palma. UES was decommissioned in 1997, and later donated to the IAC, where was transformed into HORuS in 2010-2016. The instrument is available on GTC since January 2019.

MEGARA DRP

DOI: 10.5281/zenodo.593647 docs: passing pypl package: 0.10.1 Travis CI: passing coverage: 40%

This is Megara DRP, the data reduction pipeline for MEGARA, the optical Integral-Field Unit and Multi-Object Spectrograph designed for the Gran Telescopio Canarias (GTC).

You can install megaradrp using the released code in PyPI or the development version in Github.

The installation instructions are available in the online documentation or doc/installation.rst in the source distribution.

PyEmir

EMIR

latest

Search docs

PyEmir Installation Preliminaries Imaging mode tutorial: combination of dithered exposures Spectroscopic mode tutorial: MOS data Flatfield generation

Docs » PyEmir Documentation Edit on GitHub

PyEmir Documentation

Welcome. This is the Documentation for PyEmir (version 0.15).

EMIR is a wide-field, near-infrared, multi-object spectrograph (MOS) installed at the Nasmyth focus of GTC. Its MOS mode allows observers to obtain tens of intermediate-resolution spectra simultaneously in the nR bands Y, J, H and K. EMIR is designed to address the science goals of the proposing team and of the Spanish community at large.

Maintainers: Sergio Pascual (sergiopr@fis.ucm.es), and Nicolás Cardiel (cardiel@ucm.es)





Science-ready data Calar Alto Archive

<https://caha.sdc.cab.inta-csic.es/calto/>
In operation since September 2011.

Three different types of science-ready data exist at the CAHA archive:

I) Astrometrically corrected images (BUSCA, OMEGA 2000, MOSCA)

- Raw images do not include the WCS information.
- Astrometry.net to provide astrometry.
- Metadata with quality information are included as additional keywords in corrected images.

```

BP_1_1 = 3.50179892622E-05 / distortion coefficient
BP_2_0 = -3.23300099324E-05 / distortion coefficient
COMMENT
COMMENT Astrometric reduction using Astrometry.net v0.24
COMMENT Astrometry statistics in arcsec (match-radius= 5arcsec)
COMMENT Number of detected sources in the image= 37
COMMENT Number of USNO-B1 counterparts= 15
COMMENT Separation with USNO-B1 counterparts (Mean)= 2.48824
COMMENT Separation with USNO-B1 counterparts (Stddev)= 1.26344
COMMENT Separation with USNO-B1 counterparts (Median)= 2.36640
COMMENT Number of 2MASS counterparts= 14
COMMENT Separation with 2MASS counterparts (Mean)= 2.47454
COMMENT Separation with 2MASS counterparts (Stddev)= 1.31504
COMMENT Separation with 2MASS counterparts (Median)= 2.57520
END
  
```



II) Astrometrically and photometrically corrected images:

CAFOS: <https://filabres.readthedocs.io/en/latest/index.html>



EXCELENCIA
MARÍA
DE MAEZTU

Filabres

Filabres

latest

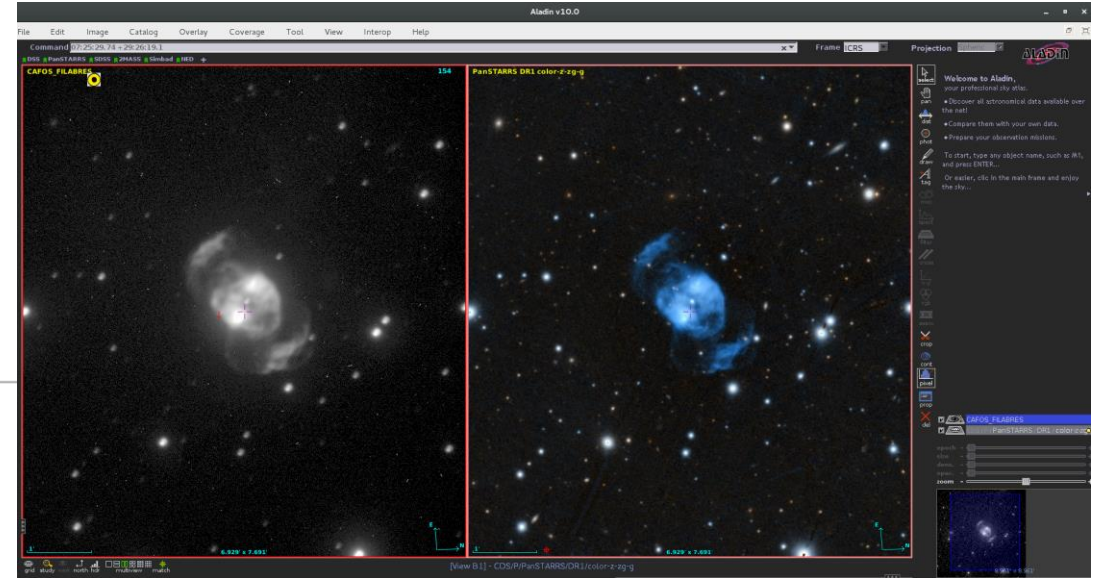
- Filabres installation
- Initial setup
- Initial image check
- Image classification
- Reduction of bias images

Docs » Welcome to Filabres's documentation! [Edit on GitHub](#)

Welcome to Filabres's documentation!

This is the documentation for **filabres** (version 1.0).

Filabres is embedded in a joint effort of the **Calar Alto Observatory** (especially Santos Pedraz and Jesús Aceituno), the **Spanish Virtual Observatory** (Enrique Solano, José Manuel Alacid and Miriam Cortés), and the **Physics of the Earth and Astrophysics Department** at the Universidad Complutense de Madrid (Nicolás Cardiel, Sergio Pascual, Enrique Galcerán and Jaime Hernández), and the collaboration of the **Instituto de Física de Cantabria** (Maite Ceballos), with the main goal of providing useful reduced images through the Calar Alto Archive hosted at <http://caha.sdc.cab.inta-csic.es/calto/>.



Calar Alto Archive

CAHA: Results

Total results: 40

CAHA_ID	OBJ.FCT	RA (deg)	DEC (deg)	Telescope	Instrument	Type	Filter	Grism/Grating	Central λ (nm)	Res. Disp.	ObsDate	ObsTime	ExpTime (s)	Airmass		Raw Data		Advanced Science Data Products			Quality flag		
														begin	end	Science Data		Calibration Data	view			Fetch	
																view	Fetch	Fetch	Fetch				
231383	NGC 2371	111.6451	29.4590	CA-2.2	CAFOS 2.2	IMG	John I	N/A	N/A	N/A	2016-03-11	22:01:13	30.0	1.09	-	Header	Data	FITS	FILES	Header	Data	FITS	0
231400	NGC 2371	111.6451	29.4590	CA-2.2	CAFOS 2.2	IMG	John I	N/A	N/A	N/A	2016-03-11	22:02:27	50.0	1.09	-	Header	Data	FITS	FILES	Header	Data	FITS	0
231413	NGC 2371	111.6451	29.4590	CA-2.2	CAFOS 2.2	IMG	John I	N/A	N/A	N/A	2016-03-11	22:06:42	100.0	1.10	-	Header	Data	FITS	FILES	Header	Data	FITS	0
231434	NGC 2371	111.6450	29.4590	CA-2.2	CAFOS 2.2	IMG	John I	N/A	N/A	N/A	2016-03-12	22:13:37	200.0	1.12	-	Header	Data	FITS	FILES	Header	Data	FITS	0
231437	NGC 2371	111.6449	29.4590	CA-2.2	CAFOS 2.2	IMG	John I	N/A	N/A	N/A	2016-03-12	23:02:13	200.0	1.24	-	Header	Data	FITS	FILES	Header	Data	FITS	0
231447	NGC 2371	111.6468	29.4510	CA-2.2	CAFOS 2.2	IMG	John I	N/A	N/A	N/A	2016-03-12	00:08:19	200.0	1.53	-	Header	Data	FITS	FILES	Header	Data	FITS	0
231453	NGC 2371 [OH]	111.6450	29.4590	CA-2.2	CAFOS 2.2	IMG	5019	N/A	N/A	N/A	2016-03-12	23:08:10	900.0	1.25	-	Header	Data	FITS	FILES	Header	Data	FITS	1
231469	NGC 2371 [OH]	111.6469	29.4590	CA-2.2	CAFOS 2.2	IMG	5019	N/A	N/A	N/A	2016-03-12	23:10:19	900.0	1.42	-	Header	Data	FITS	FILES	Header	Data	FITS	1
231485	NGC 2371	111.6410	29.4590	CA-2.2	CAFOS 2.2	IMG	John I	N/A	N/A	N/A	2016-03-12	22:57:29	200.0	1.22	-	Header	Data	FITS	FILES	Header	Data	FITS	0
231473	NGC 2371	111.6451	29.4590	CA-2.2	CAFOS 2.2	IMG	John I	N/A	N/A	N/A	2016-03-12	22:43:06	200.0	1.18	-	Header	Data	FITS	FILES	Header	Data	FITS	0

page number: 1 of 4 [Next page](#)

Retrieve Selected Data



III) Reduced spectra

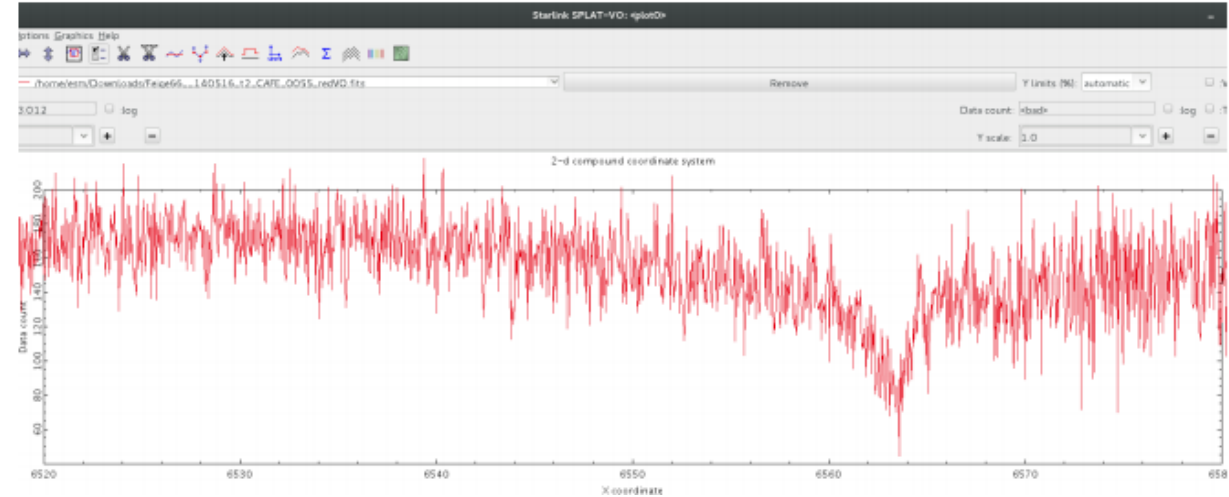
- **CAFE:**

MNRAS **000**, 1–11 (2019) Preprint 21 November 2019 Compiled using MNRAS L^AT_EX style file v3.0

CAFE₂: an upgrade to the CAFE high-resolution spectrograph. Commissioning results and new public pipeline

J. Lillo-Box,^{1,2*} J. Aceituno,³ S. Pedraz,³ G. Bergond,³ D. Galadí-Enríquez,³
 M. Azzaro,³ B. Arroyo-Torres,³ A. Fernández-Martín,³ A. Guijarro,³ R. P. Hedrosa,³
 I. Hermelo,³ F. Hoyo,³ P. Martín-Fernández,³

¹Departament d'Astronomia i Astrofísica, ²Centre d'Astrobiologia (CSIC-INTA), ESAC campus 28602 Villanueva de la Cañada (Madrid), Spain



CAHA: Results

Total results: 2406

CAHA_ID	OBJECT	RA (deg)	DEC (deg)	Telescope	Instrument	Type	Raw Data				Advanced Science Data Products ?	
							Science Data		Calibration Data		view	fetch
							view	fetch	view	fetch		
156616	PYC_J12376+3450	189.6083	34.7763	CA-2.2	CAFE 2.2	SPEC	Header	-	FITS	FILES	View	FITS
156617	PYC_J12233+6754	186.0208	67.8296	CA-2.2	CAFE 2.2	SPEC	Header	-	FITS	FILES	View	FITS
156618	PYC_J17071+2224E	256.9500	22.3962	CA-2.2	CAFE 2.2	SPEC	Header	-	FITS	FILES	View	FITS
156619	PYC_J12376+3450	189.6083	34.7763	CA-2.2	CAFE 2.2	SPEC	Header	-	FITS	FILES	View	FITS
156620	Feige66	189.5375	24.9925	CA-2.2	CAFE 2.2	SPEC	Header	-	FITS	FILES	View	FITS



- **CARMENES:** (Caballero et al. 2016SPIE.9910E..0EC)

CARMENES: data flow

J. A. Caballero^{*a,b}, J. Guàrdia^c, M. López del Fresno^b, M. Zechmeister^d, E. de Juan^e,
 F. J. Alonso-Floriano^f, P. J. Amado^g, J. Colomé^c, M. Cortés-Contreras^f, Á. García-Pi
 E. de Guindos^c, H.-J. Hagen^h, J. Helmling^c, L. Hernández Castaño^e, M. Kürsterⁱ, J. L.
 D. Montes^f, R. Morales Muñoz^g, A. Pavlovⁱ, A. Quirrenbach^a, A. Reiners^d, I. Ribas
 E. Solano^b

CAHA: Results

Total results: 4575

CAHA_ID	OBJECT	RA (deg)	DEC (deg)	Telescope	Instrument	Type	Raw Data				Advanced Science Data Products ?		Quality flag
							Science Data		Calibration Data		view	fetch	
							view	fetch	view	fetch			
245795	2MUCD 20699	256.4514	-5.2795	CA-3.5	CARMENES	SPEC	Header	-	FITS	FILES	View	FITS	-
245796	J23064-050	346.6220	-5.0413	CA-3.5	CARMENES	SPEC	Header	-	FITS	FILES	View	FITS	-
245797	J23064-050	346.6220	-5.0413	CA-3.5	CARMENES	SPEC	Header	-	FITS	FILES	View	FITS	-

CAHA: Results

CAHA_ID	Advanced Science Data Products		
	Type	view	fetch
245795	Science spectrum	Header -	FITS
245795	calibration/sky spectrum	Header -	FITS

CARMENES: d more info at Caballero et al. 2016SPIE.9910E..0EC

