



ACCESSING THE LCO DATA ARCHIVE

Summary

Short Description: This document explains how to access the LCO data archive.

Language: English

Suitable for age: 7-18 years

Key words: Robotic telescopes; Data; Archive

Format: .doc

Link: <https://archive.lco.global/>

Instructions

1. Signing In

You should begin by signing in to the archive using the same username and password you use to access the observatory portal.

2. Date (calendar)

This specifies the time period from which results will appear. The default is this semester and there are several other pre-defined date ranges to choose from. If you need a more specific time range, choose "Custom Range" or the easiest option is to select "**All Time**".

3. Proposal

This is the proposal from which the observations are made. If you are logged in, your proposals (all beginning with FTP) will appear at the top, under 'My proposals'. However, we recommend leaving this on '**All**'.



4. Basename

This is the name of the file that is created when your image is taken. We don't recommend using this search field.

5. Point

The point field allows you to search for an **object by its position** on the sky. Entering an object name (eg. M42) in the Lookup field will use an online service to search for the object, and populate the **RA and Dec** (coordinates) search fields automatically. You can also manually enter a position.

6. Object

This searches for an object as it is named in the FITS header. It is not an exact match and we do not recommend using this search box.

7. Obstype

This refers to the type of observation you are looking for. You will want the **'EXPOSE'** option which describes an image exposure.

8. Reduction Level

This describes how much processing the data has been through. You will want to select **'Reduced (BANZAI)'**.

Raw files have undergone no processing and Quicklook files have undergone processing but only with calibration frames that were available at the time. Reduced files have undergone processing with the most suitable calibration frames and will show the most clear cut image of your target.

9. Site

This is the telescope site at which the observation was made:

lsc:	Chile	Cerro Tololo Interamerican Observatory
bpl:	California	Back Parking Lot
coj:	Australia	Siding Spring Observatory
cpt:	Sutherland	Astronomical Observatory
elp:	Texas	McDonald Observatory
ogg:	Hawaii	Haleakala Observatory
sqa:	California	Sedgwick Reserve
tfn:	Tenerife	Teide Observatory

10. Telescope

This is the telescope class (or size) with which the observation was made:

0m4 options are the 0.4-metre telescopes

1m0a is the 1-metre telescopes

2m0a is the 2-metre telescopes

11. Instrument



This is the camera that was used to take your image. It is unlikely you will know this and there are a lot of options! You should leave this set to **'All'**.

12. Filter

This is the filter that was used when making your observation. If you have done a colour image you will want to select **'B'**, **'V'** and **'R'** for blue, green and red (make sure you choose the ones in Caps Lock). However if you have taken your images on a 0.4-metre telescope you will need to select **'rp'** for red. You can only search each filter individually.

13. Exposure Time

This is the **exposure time** of your observation in **seconds**. This will retrieve images with exposures equal to or greater than the value you input.

14. Reset

If you want to reset all the fields in your search, click this button.

15. Expanding Selection

By clicking on the **+** sign next to an image you can see a preview of what the image looks like and what calibration was carried out.

coj2m002-fs01-20170830-0052-e91

2017-08-30
19:05:38

FTPEP02014A-004

M42

V

EXPOSE

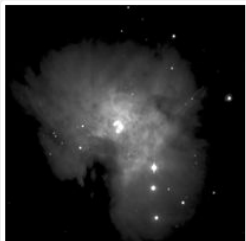
90.000

Reduced (BANZAI)

Calibration and Catalog Frames

VIEW HEADERS

	Basename	Type
<input type="checkbox"/>	dark_fs01_20170830_bin2x2	DARK
<input type="checkbox"/>	bias_fs01_20170830_bin2x2	BIAS
<input type="checkbox"/>	coj2m002-fs01-20170830-0052-e00	EXPOSE
<input type="checkbox"/>	skyflat_fs01_20170828_bin2x2_V	SKYFLAT
<input type="checkbox"/>	bpm_coj_fs01_20150809_bin2x2	BPM



16. Downloading Data

If you want to download images, tick the small box **to the left of the Basename of the image(s)** you want (as circled above) and click the blue **'Download'** button. There are 2 options which you can choose:

1. zip download (with compressed fits files) or
2. zip download (with uncompressed fits files).

If you choose option (1) then your files will be the **.fits.fz** format and whatever software package you use to open the files must be able to display **.fz** files. If you choose option (2) then your file sizes will be larger, but you can use any software package that opens **.fits** files to open your data.

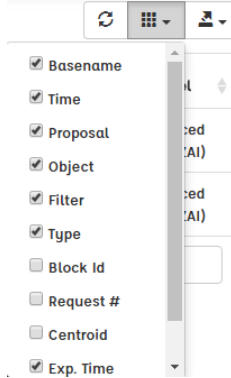
17. Refresh, Table and Export



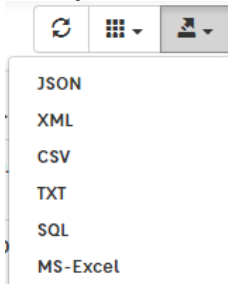


This is the **refresh** button, it will reload the data in the table whilst **preserving the search filters** you have set.

Here you can select which columns you want to be **displayed in the data table**. Some columns are hidden by default.



Here you can **export the table** of data in a variety of formats.



Example

If you wanted to search the data archive for **all public data** on **M51**, the Whirlpool Galaxy, taken with a **2m telescope** over **all time**, you would set the following values:

2000-01-01 00:00
2021-05-25 23:59

Proposal ?
All

☒ Include public data

Basename

Looking for an object? **Point** ?
☒

M51

13:29:52.69 +47:11:42.9

Object ?

Obstype
EXPOSE

Reduction Level ?
Reduced (BANZAI)

Site
All

Telescope
2m0a

Instrument
All

Filter
All

Exposure Time ?

All

Enter 'M51' and click on the magnifying glass





2017-04-01 00:00

2017-11-30 23:59

Proposal ?

ALL

☒ Include public data

Basename

Looking for an object?

Point ?

Search Sources

RA

Dec

Object ?

Obstype

Reduction Level ?

Site

Telescope

Instrument

Filter

Exposure Time ?

RESET

DOWNLOAD 0

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	Baseline	Time	Proposal	Object	Filter	Type	Exp. Time	R.level
<div><div></div><div>+</div></div>	trnOm414-kb29-20170904-0194-d00	2017-09-05 07:25:22	calibrate		B	DARK	299.824	Raw
<div><div></div><div>+</div></div>	trnOm414-kb29-20170904-0193-b00	2017-09-05 07:25:10	calibrate		B	BIAS	0.001	Raw
<div><div></div><div>+</div></div>	trnOm414-kb29-20170904-0192-b00	2017-09-05 07:25:01	calibrate		B	BIAS	0.001	Raw
<div><div></div><div>+</div></div>	trnOm414-kb29-20170904-0191-b00	2017-09-05 07:24:52	calibrate		B	BIAS	0.005	Raw
<div><div></div><div>+</div></div>	trnOm414-kb29-20170904-0190-b00	2017-09-05 07:24:43	calibrate		B	BIAS	-0.002	Raw
<div><div></div><div>+</div></div>	trnOm414-kb29-20170904-0189-b00	2017-09-05 07:24:34	calibrate		B	BIAS	0.012	Raw
<div><div></div><div>+</div></div>	trnOm414-kb29-20170904-0188-b00	2017-09-05 07:24:25	calibrate		B	BIAS	0.004	Raw
<div><div></div><div>+</div></div>	trnOm414-kb29-20170904-0187-b00	2017-09-05 07:24:17	calibrate		B	BIAS	0.005	Raw
<div><div></div><div>+</div></div>	trnOm414-kb29-20170904-0186-b00	2017-09-05 07:24:08	calibrate		B	BIAS	0.002	Raw
<div><div></div><div>+</div></div>	trnOm414-kb29-20170904-0185-b00	2017-09-05 07:24:00	calibrate		B	BIAS	0.004	Raw

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records per page



Co-funded by the
Erasmus+ Programme
of the European Union