



Submitting an Observation Request to the (Simple) LCO Interface

Summary

Short Description: These step-by-step instructions will take you through how to use your Faulkes Telescope account to access the Las Cumbres Observatory (LCO) interface in 'Simple' or 'Basic' mode, and submit an observation request of an object of your choice.

Language: English

Suitable for age: 7-18 years

Key words: Robotic telescopes; Observing

Format: .doc

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

Instructions

Step 1: To submit an observation on the Faulkes Telescope using the LCO network you will need to follow the link here: <https://observe.lco.global/>. This will take you to the screen shown in **Figure 1**.

Step 2: Select one of the 'Login' options circled in Figure 1 and input your username and password. Your username is usually your email address.



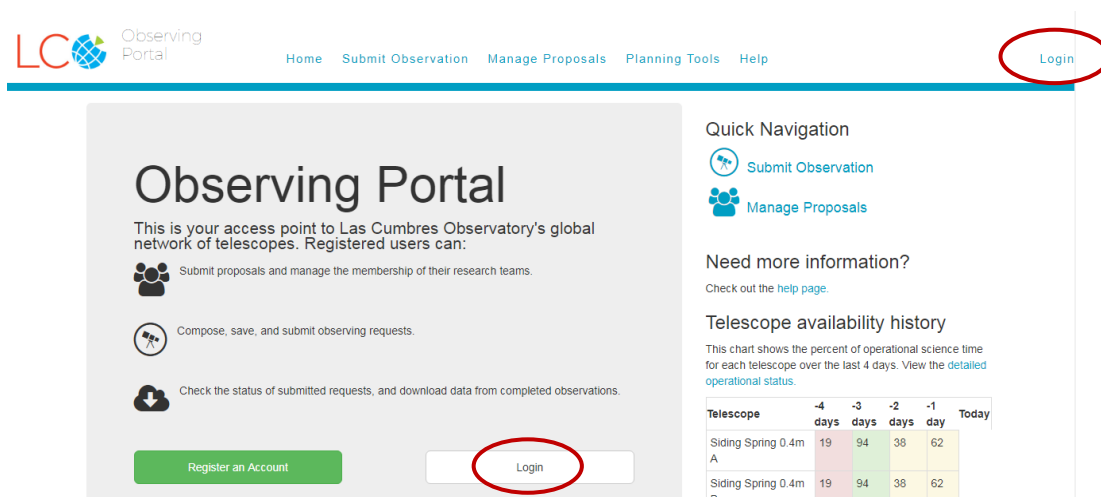


Figure 1 – Logging on to LCO’s observing portal

Step 3: You will be able to see if you are in ‘Basic’ mode by looking next to your name in the top right of the screen. If it does not say ‘Basic Mode’, you will need to turn this on. Do this by clicking on your **name**, then **profile** (Fig. 2) and **select simple interface** at the bottom of the page (Fig. 3).

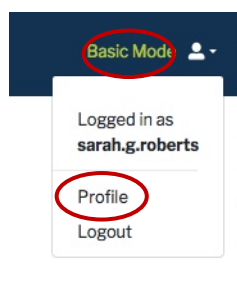


Figure 2 – Entering your profile in the LCO system.

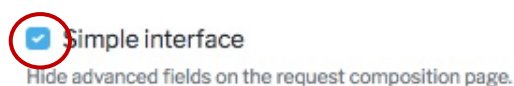


Figure 3 – Selecting the simple interface option to use the Basic mode.

Step 4: You’ll now be taken to a page that displays a lot of information. You don’t need to worry about most of this, just simply select ‘**Submit Observation**’ to request your observation as shown in Figure 4.

Submitted Observation Requests

Filter List

User Info	State Info	# Requests / Pending / Failed / Complete			
Cats Eye 2m RGB Ha O111 17July scott_whitehouse FTPEPO2014A-004	PENDING 2017-07-17 11:30:03	1	1	0	0
Freya7 gary_loveridge FTPEPO2014A-004	PENDING 2017-07-17 09:10:04	1	1	0	0
Freya6 gary_loveridge FTPEPO2014A-004	PENDING 2017-07-17 08:58:01	1	1	0	0
Pillars-PJW peter_williamson FTPEPO2014A-004	PENDING 2017-07-17 07:51:37	1	1	0	0
2012 FK70 matthias_penselin FTPEPO2014A-003	PENDING 2017-07-16 21:00:23	1	1	0	0

Quick Navigation

Submit Observation

Manage Proposals

Need more information?

Check out the [help page](#).

Telescope availability history

This chart shows the percent of operational science time for each telescope over the last 4 days. View the [detailed operational status](#).

Telescope	-4 days	-3 days	-2 days	-1 day	Today
Siding Spring 0.4m A	19	94	38	62	

Figure 4 – Where to go to submit your observation

Your screen should now display the Observation Request Form. The following steps will take you through each section of this form.

Don't panic if you see a lot of red error messages on the page. These will remain until you have completed all the information boxes.

General Information Section

This is the general summary section of your observation request (Fig. 5).

Step 5: In the 'Name' box you should give your observation a suitable title that you will remember.

You may want to use your **name or initials** so that you can find your images easily once they've been taken.

Step 6: 'Proposal' refers to the telescope proposal you wish to take the observation time from. You should select '**FTP Education – Queue**'.

General Information

Duration of Observation Request:

0 hrs 0 min 0 sec

Name

Please provide a name.

Proposal

Please provide a proposal.

Figure 5 – General information section of the observation request form

Request Section

Step 7: Next we have the Request section (Fig. 6). Here you should select the instrument you wish to use. You can choose from the three sizes of telescopes, 2-metre, 1-metre or 0.4-metre. The **2.0-meter Spectral** option is for FTS (Australia), the **2.0-meter Muscat** option is for FTN (Hawaii) and the name describes the name of the camera on these telescopes. The

Muscat camera was installed in April 2021 and enables the user to take 4 images simultaneously during one observation (g,r,i,z bands), so you won't see the 'Filter' option available to you later on in the page. For more information on Muscat, please go to the [Muscat page on the LCO website](#).



Figure 6 – Request section of the observation request form

Instrument Configuration

The instrument configuration is where you fill in the details of the filters, exposure times and where applicable, readout mode and exposure mode. The boxes you fill out here depend on which instrument you have selected to use from the previous section and each option is shown in the highlighted boxes below:

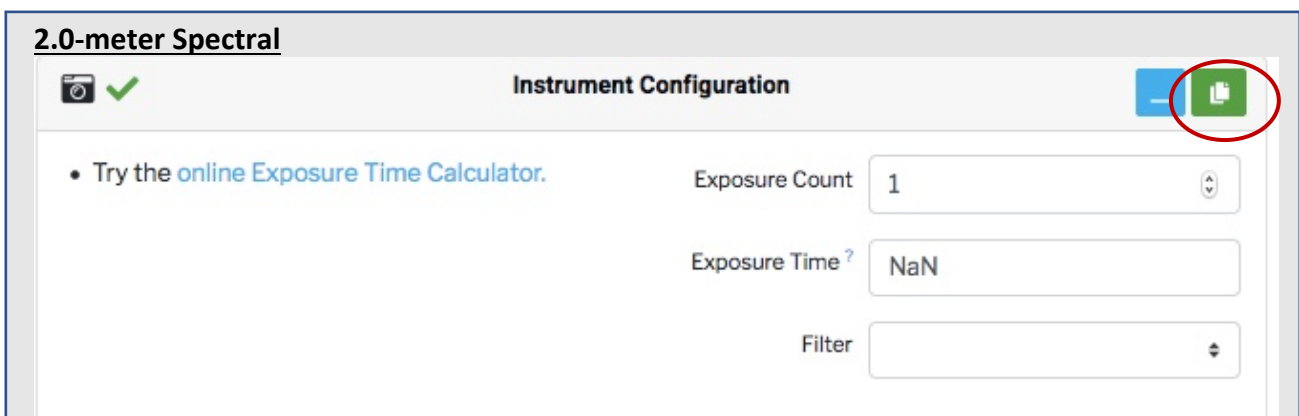


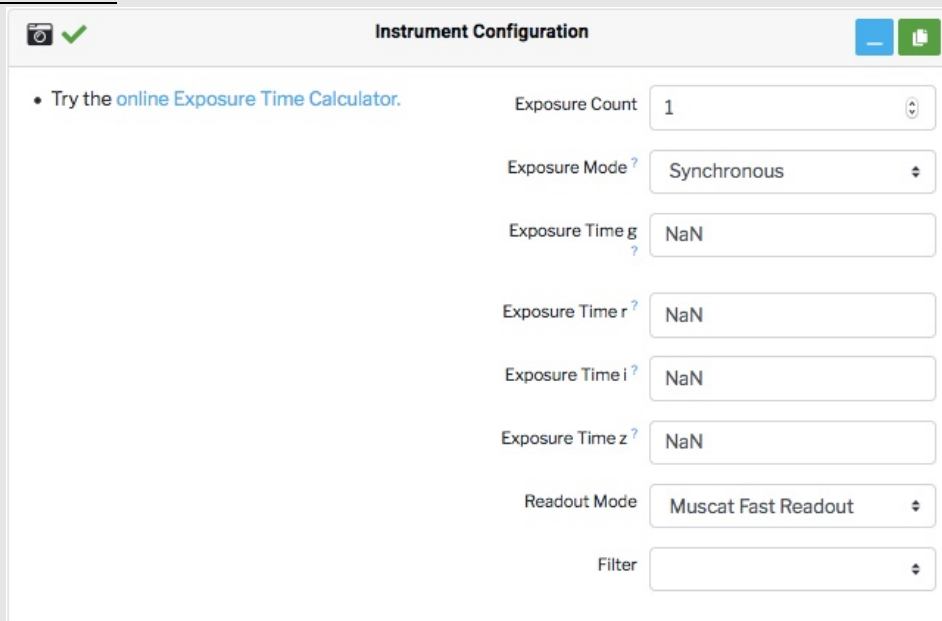
Figure 7 – Instrument configuration section of the observation request form for 2.0-meter Spectral (FTS)

Step 8: Leave 'Exposure Count' on 1 (this is the number of images you will take) and enter your 'Exposure Time'. If you're unsure on what exposure time to use, you can follow the link to the LCO online Exposure Time Calculator provided on the left side of the configuration section, or you can search the LCO data archive to see what other users have selected for the same object.

Step 9: Now select the **filters** you wish to use. If you want a **colour image** you will need to select the **Blue, Green and Red** filters. You can only select one filter at a time so begin by selecting 'Blue'.

Step 10: To **add another filter**, you will need to click the **little green icon** at the top of the window circled in red in Figure 5; this is '**Copy**'. It will replicate the details you have just inputted so you will need to change the filter, for example to Green and also adjust the exposure time if you need to. You can then repeat this for however many filters you wish to use.

2.0-meter Muscat



Instrument Configuration

- Try the [online Exposure Time Calculator](#).

Exposure Count: 1

Exposure Mode: Synchronous

Exposure Time g: NaN

Exposure Time r: NaN

Exposure Time i: NaN

Exposure Time z: NaN

Readout Mode: Muscat Fast Readout

Filter:

Figure 8 – Instrument configuration section of the observation request form for 2.0-meter Muscat (FTN)

Step 11: Leave ‘Exposure Count’ on 1 (this is the number of images you will take) and choose ‘Synchronous’ exposure mode. This starts taking all the images at the same time.

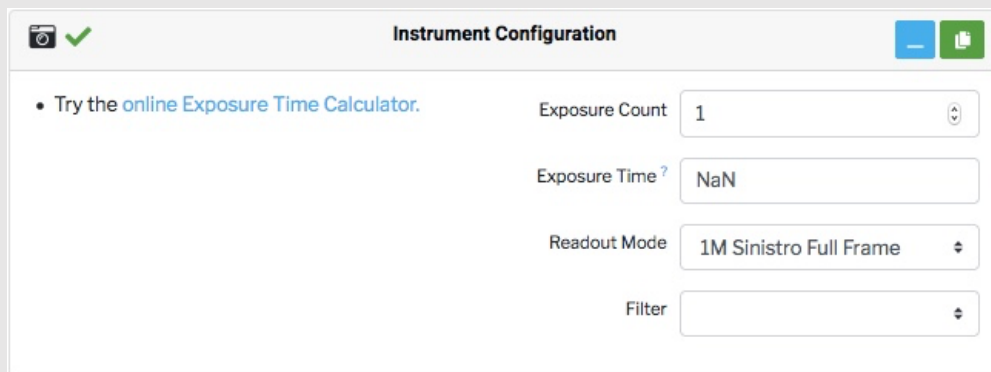
Step 12: Now choose the exposure times for each filter (g, r, i and z). If you’re unsure on what exposure time to use, you can follow the link to the LCO online Exposure Time Calculator provided on the left side of the configuration section, or you can search the LCO data archive to see what other users have selected for the same object.

Step 13: The Readout Mode can be left as ‘Muscat Fast Readout’.

NB. If a ‘filter’ option appears at the end of this section, it can be ignored as it is not used for the Muscat camera.



1.0-meter Sinistro



Instrument Configuration

• Try the [online Exposure Time Calculator](#).

Exposure Count: 1

Exposure Time: NaN

Readout Mode: 1M Sinistro Full Frame

Filter:

Figure 9 – Instrument configuration section of the observation request form for 1.0-meter Sinistro

Step 14: Leave ‘Exposure Count’ on 1 (this is the number of images you will take) and enter your ‘Exposure Time’. If you’re unsure on what exposure time to use, you can follow the link to the LCO online Exposure Time Calculator provided on the left side of the configuration section, or you can search the LCO data archive to see what other users have selected for the same object.

Step 15: The readout mode can be left as ‘1M Sinistro Full Frame’.

Step 16: Now select the **filters** you wish to use. If you want a **colour image** you will need to select the **Blue, Green** and **Red** filters.

You can only select one filter at a time so begin by selecting ‘Blue’.

Step 17: To **add another filter**, you will need to click the **little green icon** at the top of the window circled in red in Figure 5; this is ‘**Copy**’. It will replicate the details you have just inputted so you will need to change the filter, for example to Green and also adjust the exposure time if you need to.

You can then repeat this for however many filters you wish to use.



0.4meter SBIG

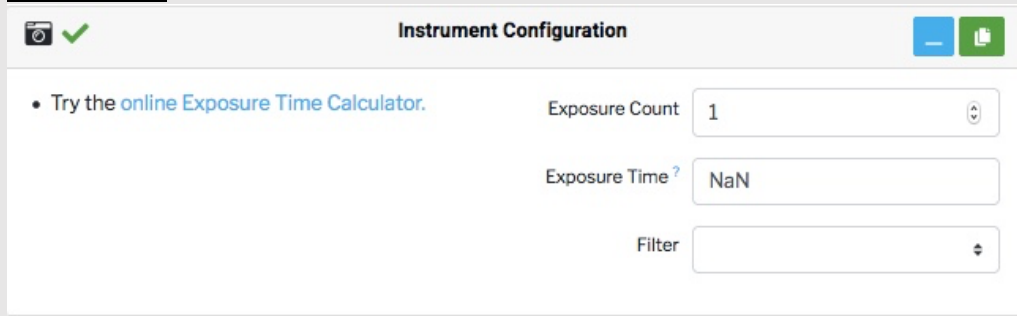


Figure 10 – Instrument configuration section of the observation request form for 0.4-meter SBIG

Step 18: Leave ‘Exposure Count’ on 1 (this is the number of images you will take) and enter your ‘Exposure Time’. If you’re unsure on what exposure time to use, you can follow the link to the LCO online Exposure Time Calculator provided on the left side of the configuration section, or you can search the LCO data archive to see what other users have selected for the same object.

Step 19: Now select the **filters** you wish to use. If you want a **colour image** you will need to select the **Blue, Green and Red** filters.
You can only select one filter at a time so begin by selecting ‘Blue’.

Step 20: To **add another filter**, you will need to click the **little green icon** at the top of the window circled in red in Figure 5; this is ‘**Copy**’. It will replicate the details you have just inputted so you will need to change the filter, for example to Green and also adjust the exposure time if you need to.
You can then repeat this for however many filters you wish to use.

Target Section

The target section is where you fill in the details about the object you wish to image.

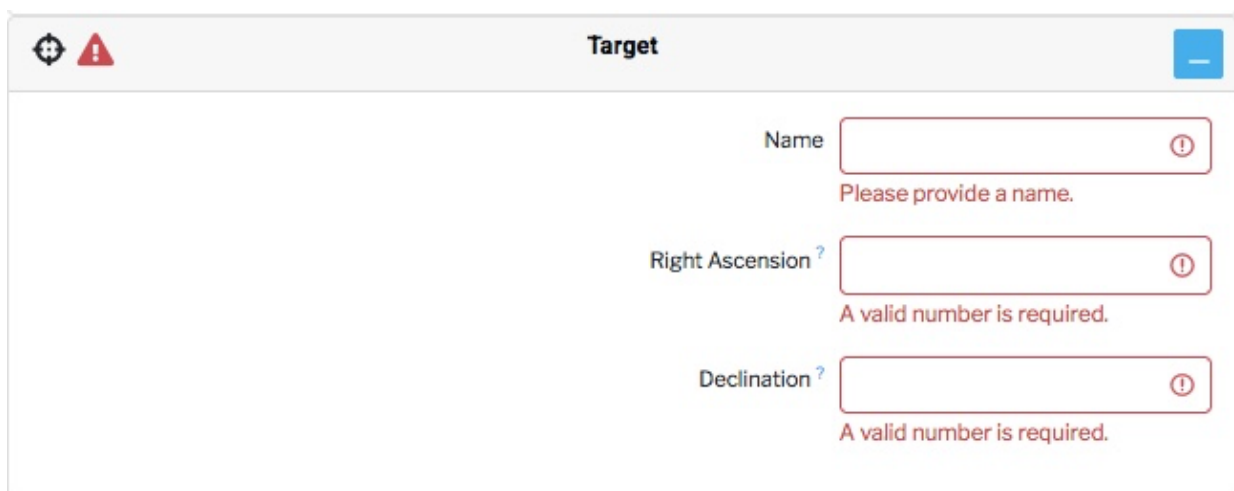


Figure 11 – Target section of the observation request form



Step 21: If you know the Messier or NGC number of your object, you should insert it in the **'Name'** box. This makes it more likely that the scheduler will be able to find the right ascension and declination for you automatically.

If the right ascension and declination values do not come up automatically, you will need to enter them yourself. You can search these coordinates on Stellarium or through a Google search of your object.

Window

We now move onto the Window section. This describes the **time window** in which you would like your observation to be made (Fig. 12).

Step 22: The time is set to Universal Time and the **Start time will default to the current time**. We recommend putting your **End time a week later**. This should be enough time for you observation to be made and not be cancelled due to either telescope or camera problems or bad weather.

If you're lucky, the scheduler may even plan a time to image your object as little as 15 minutes after submitting your request. However, this can also change as other requests come in, so keep checking.

The graph that appears as displayed in Figure 12 shows you the visibility of your target in the time window you have set.

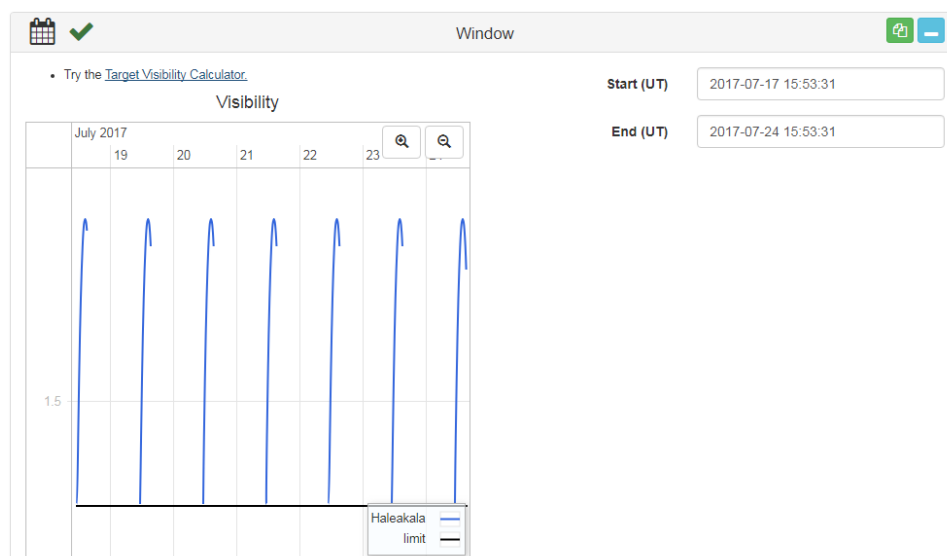


Figure 12 – Window section of the observation request form

You have now completed the observation request form. If you scroll back to the top of the page it will tell you the duration of your request. This describes how much observing time it will take to take your observation.



Figure 13 – Duration of your observing request

Step 23: If you would like to request observations of **more than one object**, you should scroll back to the **‘Request’** section. First of all, select the little blue icon in the top-right corner – this is minimise. Then select the **green copy icon**.

You should notice that this causes **‘Request #2’** to appear on the right hand side of your screen as seen in Figure 14.

✓ **General Info**

✓ Request #1

✓ Request #2

Figure 14 – Your different requests within your observation request form

Step 24: By clicking on Request #2, this will take you to your **replicated request**. The boxes will already be completed with the information you submitted for your Request #1 so you will need to **change this according to the additional object you wish to observe**.

Step 25: When you are happy with your requests and have completed the form, scroll back to the top of the page and select the green **‘Submit’** button. This will process your request and it will go into the telescope network scheduler.

Figure 15 – Submitting your observation request form to the LCO telescope scheduler

Step 26: This will cause a **pop-up** that asks if you are sure you want to submit your request, you should select **‘OK’**.

If this message does not pop-up you may need to enable pop-ups in your internet settings.

Figure 16 – The request submission pop-up

All you need to do now, is come back in a week’s time (or how over long you set your time window as) to retrieve your images.

For further information, contact support@faulkes-telescope.com

