

# How To Request A 3 Colour Observation From The Liverpool Telescope

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Requesting an 3 observation from the Liverpool Telescope can be quick and simple to do. This guide will take you through the steps required to utilise the NSO website and make requests of the world's largest fully robotic telescope.

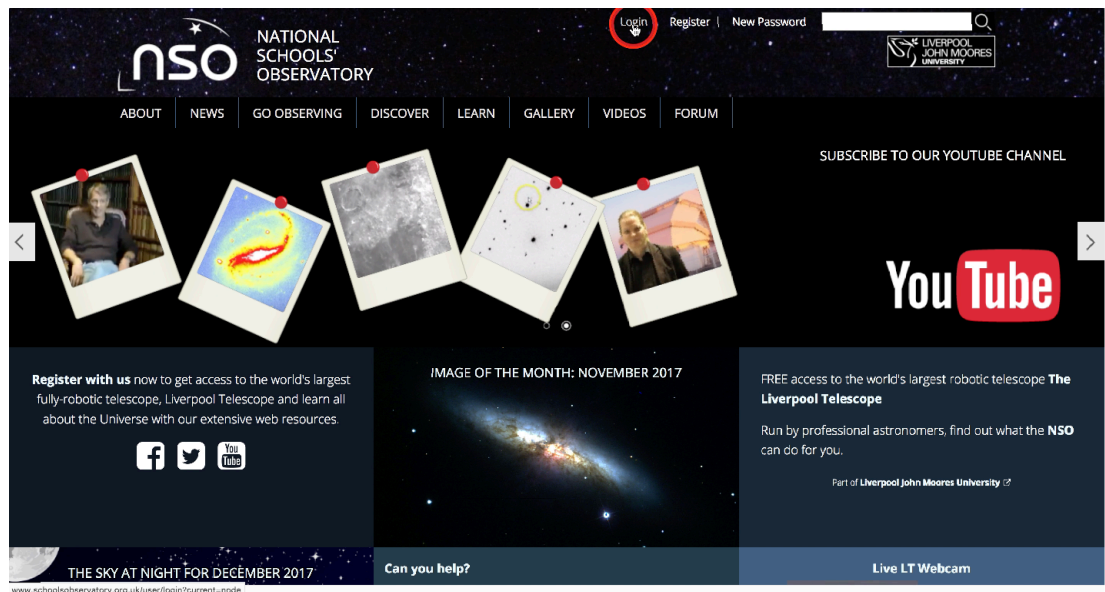
A 3 colour image involves making 3 observation requests of the same object, using 3 different filters. These images are then combined using astronomy software, such as LT Image, to create a 3 colour image.

## Stages:

1. Log in to the NSO website
2. Go to 'Go Observing'
3. Select the object you wish to observe
4. Confirm your selection

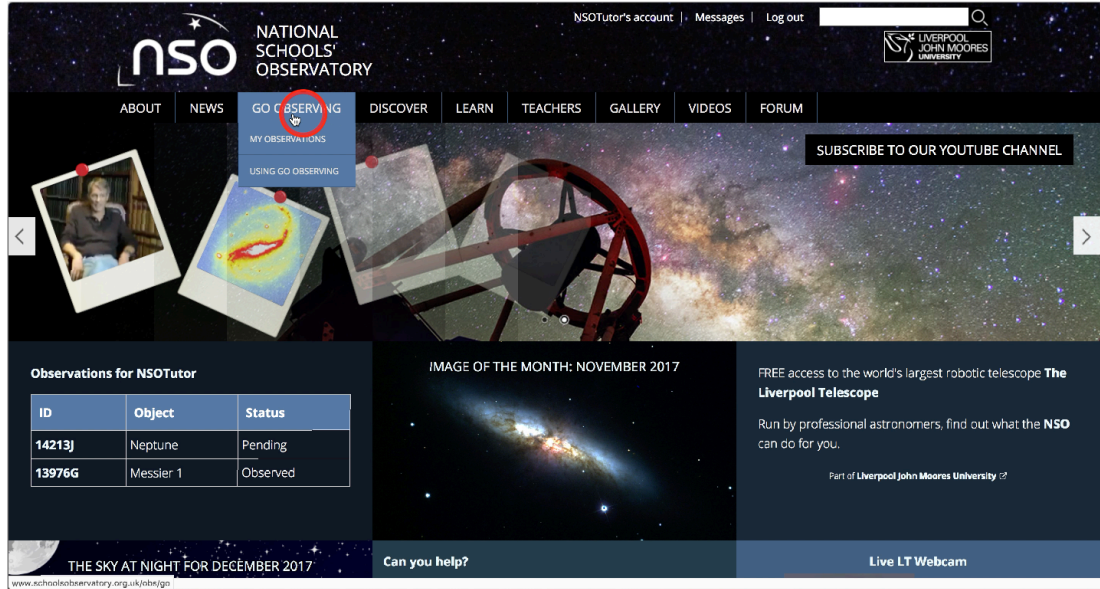
## 1. Log in to the NSO website

We must first ensure we are logged into the NSO website which is done by clicking the 'Login' link at the top of the screen. Alternatively if you have not yet created an account, this can be done by clicking the 'Register' link, which is also at the top of the screen. Registering is free and takes only a couple of minutes.



## 2. Go to 'Go Observing'

After logging in we need to select 'Go Observing' from the top menu, this is the section of the NSO website that deals with making requests from the Liverpool Telescope.

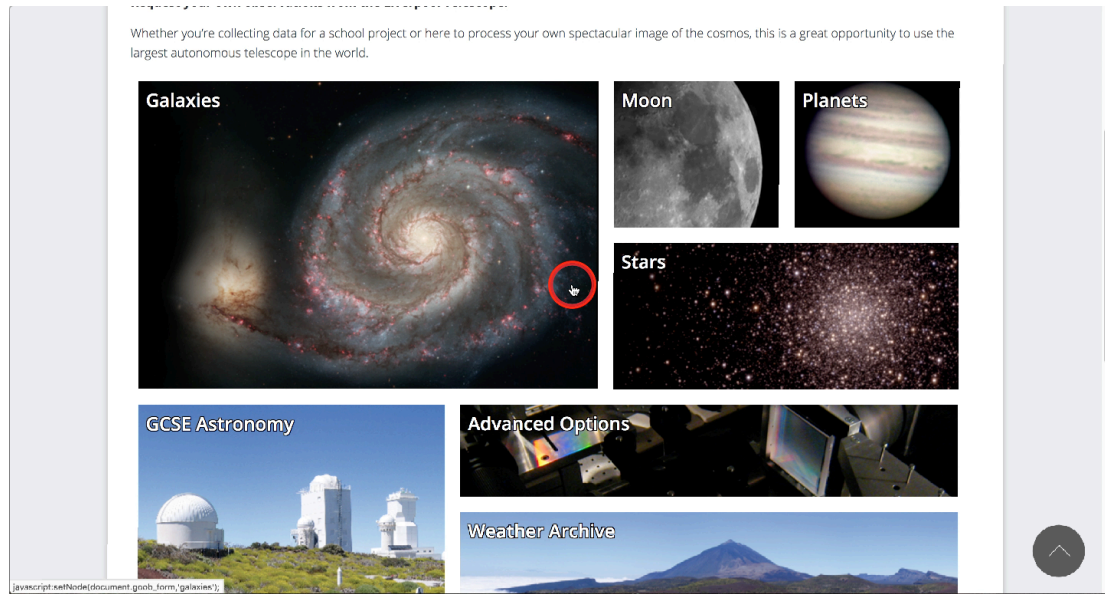


The screenshot shows the NSO website interface. At the top, there is a navigation menu with the following items: ABOUT, NEWS, GO OBSERVING (highlighted with a red circle), DISCOVER, LEARN, TEACHERS, GALLERY, VIDEOS, and FORUM. Below the navigation menu, there is a banner image featuring a telescope and a starry sky. To the left of the banner, there are three polaroid-style images: a person, a colorful nebula, and a telescope. To the right of the banner, there is a button that says "SUBSCRIBE TO OUR YOUTUBE CHANNEL". Below the banner, there are three main content areas: "Observations for NSOTutor" with a table, "IMAGE OF THE MONTH: NOVEMBER 2017" with a galaxy image, and "FREE access to the world's largest robotic telescope The Liverpool Telescope" with a text block. At the bottom, there are three smaller sections: "THE SKY AT NIGHT FOR DECEMBER 2017", "Can you help?", and "Live LT Webcam".

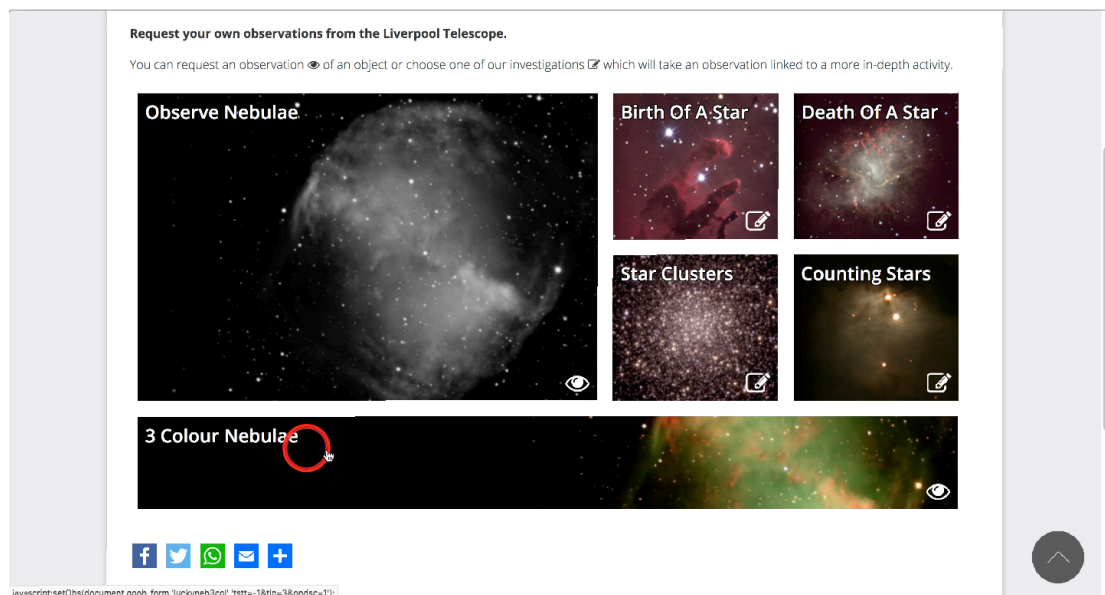
ID	Object	Status
14213J	Neptune	Pending
13976G	Messier 1	Observed

### 3. Select the object you wish to observe

At this point we need to select the object but we're first given various categories to help narrow down our selection. The menu system has been designed to be simple and easy to use, so if you wish to observe a particular galaxy, simply select the 'Galaxies' section, alternatively, if it's a planet you wish to observe, select 'Planets'. Please note that 3 colour options are only available for galaxies and nebulae (found in the 'stars' category).



Once you've selected the category you will be given a second menu of choices, one of which will be a 3 colour option, click this option.



The next stage is to select the specific object from the given list. However, you will also see a blue/black bar beside each object. This indicates the chance of successfully

observing the object. The left hand side of the bar is today, and as it moves towards the right it is indicating for dates in the future. The darker the segment the less chance of success, so a fully black bar would indicate little to no chance of an observation being successful in the timeframe selected. Perhaps the object is not visible in the northern hemisphere at this particular time of year. However, a brighter bar would indicate a very good chance of success.

Different objects in the night sky can be observed at different times or year - this is because not every part of the sky is visible to a telescope at any one moment, or sometimes the Moon might make the sky too bright for fainter objects. The coloured bars are there so you can see when some objects are observable.

Select an object from the list below.  
Use the **i** buttons to get more information about each object.

[? NEED HELP?](#)

[🔄 ANOTHER DATE?](#)

Objects	Classification	Dec 2017 10 20	Jan 2018 1
NGC1491	<b>i</b> An Emission Nebula	[Bar showing observation chances]	
NGC1514	<b>i</b> An Emission Nebula	[Bar showing observation chances]	
Northern Trifid Nebula	<b>i</b> An Emission Nebula	[Bar showing observation chances]	
NGC1893	<b>i</b> A Cluster of Stars	[Bar showing observation chances]	
NGC1931	<b>i</b>	[Bar showing observation chances]	
Messier 1	<b>i</b> An Emission Nebula - Neutron Star	[Bar showing observation chances]	

**Key: Chances of Observing**  
 Poor Reasonable Good Excellent

[f](#) [t](#) [w](#) [e](#) [+](#)

Once you've selected you object and you're happy with the chance of success being displayed, click the object and you'll be greeted with the confirmation screen.

## 4. Confirm your selection

Selecting your object will take you to a final confirmation screen, which will display the object chosen and the parameters for the three observations, e.g. exposure time, filters, etc.

Your observations will take place as soon as possible. If the observations cannot be done immediately, we will keep trying for **a month**. If this is not what you want then you can [change the timing](#).

Sometimes some objects are very difficult to observe, particularly if your observations need very dark skies or unusually good conditions. This may mean that your observations cannot be done for a while. You can use the special Colour Bars to check.

**Messier 1**

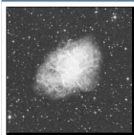


Image: Digitized Sky Survey

**Observation details**

**Red observation.**

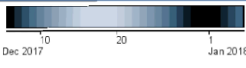
- Instrument: **IOOpt**
- Filter: **R**
- Exposure time: **90 seconds**

**Green observation.**

- Instrument: **IOOpt**
- Filter: **V**
- Exposure time: **90 seconds**

**Blue observation.**


- Instrument: **IOOpt**
- Filter: **B**
- Exposure time: **90 seconds**



Dec 2017    10    20    1    Jan 2018

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Do you want to submit this Observing Programme?

If you're still happy with your selection, simply click the 'Submit Observation' button at the bottom of the screen and your request will be sent to the telescope and be observed as soon as it is possible to do so.

**Red observation.**


- Instrument: **IOOpt**
- Filter: **R**
- Exposure time: **90 seconds**

**Green observation.**

- Instrument: **IOOpt**
- Filter: **V**
- Exposure time: **90 seconds**

**Blue observation.**


- Instrument: **IOOpt**
- Filter: **B**
- Exposure time: **90 seconds**



Dec 2017    10    20    1    Jan 2018

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Do you want to submit this Observing Programme?

If you are sure that you want to submit this program, click on the button below. You will be asked for your username again and your password. Please be careful to enter them correctly!

Please make sure that you read the [Instructions for Submitting Observations](#) carefully first.

**Submit Observations**





Once your observation has been successful it will show in the 'My Observations' section of the website as a hyperlink, which will allow you to download the observation.