

Astronomer, photographer

Earth-based telescopes can produce striking images of objects far out in space. In this article, Thomas Read describes how he took the photograph of the Sunflower Galaxy shown on pages 10-11. It won him an award in the Astronomy Photographer of the Year competition in 2012.

I got into astronomy properly in Year 8 when my school, the Commonweal school in Swindon, started an astronomy club. I had been interested before that but I became even more so when I joined the club. The same year, school also started doing the astronomy GCSE in a year, which they did in Year 9 and now I have started the course. In astronomy club I got introduced to robotic telescopes and I spent many hours on the computer at home deciding what to photograph next.

One day my astronomy teacher mentioned to me in passing in the corridor that the Royal Greenwich Observatory was running an astronomy photography competition. That same day I entered five of my pictures into the robotic scope category. A couple of months later I got an email back saying that one of my photos had been shortlisted for the award. I was invited to the awards ceremony at the observatory itself. There I found out that I had won the robotic scope category!



Thomas with his photo at the winners' exhibition

This competition was open to any age and was an international competition so there were winners of other categories from Japan and the US to name just a few.

What the photo shows

My photo (pages 10-11) shows Messier 63, nicknamed the Sunflower Galaxy. It is a spiral system, very similar to our own Milky Way. I used a relatively shallow exposure which captured the centre of the galaxy in stunning detail.

What next?

I'm not really sure what I have planned next but I am so fascinated by astronomy because there is so much more to be discovered, even when I'm old but hopefully I will be able to discover something myself. Firstly, I just want to get a good mark in my GCSE!

On page 12, Thomas explains more about how he made his image of the Sunflower Galaxy.



The Royal Greenwich Observatory



Messier 63, the Sunflower Galaxy, Image by Thomas Read

Catalyst

www.catalyststudent.org.uk





Gordon Chesterman www.gomedia.tenerife.com

The Bradford Robotic Telescope on Tenerife, Canary Islands, Spain is free for anyone to use - visit www.telescope.org

What is a Robotic Telescope?

Robotic telescopes are very expensive telescopes sited in different parts of the world that the public are able to use over the internet. I have used others, but my winning picture used a telescope in Tenerife owned by the University of Bradford.

How I decided what to photograph

On the Bradford Robotic Telescope website there is a big list of Messier objects that you can photograph. As I was scrolling down the list I saw the Sunflower Galaxy and I decided to photograph it as I had no idea what the Sunflower Galaxy was or what it looked like! Quite often with these distant objects you don't get the best results but I chose just the right time to take the picture so it came out well.

What I had to do to make the photo

Once I had selected what I wanted to photograph, I had to set the exposure time and filter. I set a relatively shallow exposure time of 120 000 ms (2 minutes) and applied a BVR colour filter. I also set the best time for the telescope to take the picture so I would get the best results. Once the photo came through I had to change the settings slightly to bring out the best results.

What the judge said

The Astronomy Photographer of the Year 2012 competition was run by the Royal Greenwich Observatory in association with *Sky at Night Magazine*.

Olivia Johnson, one of the judges, said:

Taken by a young astrophotographer using a robotic telescope, this is a beguiling photo of the Sunflower Galaxy. The relatively shallow exposure shows only the central part of the galaxy clearly but has a nice sense of depth, suggesting a yellow-orange 'island universe' floating beyond a few bright stars.

(In over 15 years working in astronomy, Olivia Johnson has used telescopes all over the world to study how structures in the Universe form and evolve.)



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Thomas receives his award from Dr Chris Lintott and Dr Marek Kukula.