

## Number 124 – August 2017



Picture of the Month - August 2017

The Sun and Sunspots AR2665 and AR2666 by Mike Paling

<http://www.sherwood-observatory.org.uk/>

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Promoting and advancing public education in the science of astronomy

MSAS was founded in 1970 to foster interest in astronomy in Ashfield and surrounding district

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## **Welcome and Introduction**

Welcome to the August edition of Event Horizon.

Our events season began with a solar day last month and we have another in early August, we also hold our annual BBQ this month. Also a viewing evening for the Perseids meteor shower is planned.

There's been plenty going on behind the scenes during the Summer shutdown, please read on for further details and if you think you would like to get involved and help out, please contact the relevant members at the addresses at the end of the newsletter.

Don't forget to check the correspondence section at the end of the newsletter where there is some great news from Peter Jenkins whose picture's you will be familiar with from the covers of EH over the last few years. Also there is news of a possible society trip to Ireland.

Thank you, Chris.

### *Fact of the Month*

"The Perseid Meteor Shower, which peaks on August 12/13, can produce up to, and sometimes more than, 100 meteors per hour. The Perseids are debris from Comet 109P/Swift-Tuttle (the Great Comet of 1862). The meteors are fast, and leave persistent trains. Some bright fireballs may also occur. However, this year, viewing conditions could be hampered by the Moon which will be between full and last quarter."

## **Society News and Information**

### *Planetarium Project*

Following the second break-in of the reservoir we have replaced the door and fortified it with a steel frame, a huge thank you to Trevor Lunn who along with his colleague Brian completed this and the clearance of the landslip in front of the reservoir entrance. The slope to the entrance has now been made safe and awaits the next step towards further development.

Such development will depend on our ability to raise funds. We have been unsuccessful in achieving our first funding target despite considerable effort from Sarah Cadwallader, who continued correspondence from hospital!

Craig Bradford and Chris Hook held a meeting with P.C. James Walters who is our local Crime Prevention Officer. He was impressed with our security measures and has made just one or two suggestions on how we may improve further deterrents. These suggestions will be discussed at the next C.M.

### *Maintenance*

As everyone is aware the maintenance team are working really hard on the upgrade and maintenance of the telescope. The mirror has been re-coated, our thanks to Craig for delivering the mirror to the workshop in London, and to Chris Dakin for safely collecting it. Chris has also completed arranging the rather difficult task of sealing the telescope pad. This was done to provide a softer landing for any dropped equipment and the surface is non slip, thus allowing us all to enjoy outdoor viewing on the pad with a little more confidence.

### *Spruce Up*

Our first attempt at a spruce up was thwarted by bad weather but we managed a little more success with the help of the following members:-

Michael Paling, Michael Lowe, David Branston - Lopping, Weeding, Strimming  
Ron Peet - Mowing  
Nigel Johnson, Maria Grosso, Neil Flynn - OCRA Painting  
David Collins - Rubbing Down  
Chris Hook, Gary Levers - Post / Barrier Painting

A few weeks later we managed a few more volunteers so were able to almost complete the list of jobs. Clearly the 'A' Team of members as Ron Peet, Phil Randall, Gary Woodward, Maria Grosso, David Branston, Val Barker, Steve Lawman, Vic Hill, Gordon Smith, Bernard, Steve Binns and Shorty all set about the painting at about half seven and the whole building was done by 8:30. The bar has been set!

A huge thank you to everyone who gave up their time to help us make the observatory and its surroundings fit for all members and the visiting public to enjoy.

Please see the following images from the evening from Ron Peet:



## Radio Astronomy

Hi all,

June and July have been somewhat quiet with meteor watch, with no major meteor showers during this time. This though is about to change as we approach probably the most popular meteor shower of the year, the Perseids on 12<sup>th</sup> August (It's also our 2<sup>nd</sup> Solar day that day). The Perseids show stems from the Earth passing through the path of Comet Swift-Tuttle from July 17 to Aug. 24, with the shower's peak as the Earth passes through the densest, dustiest area occurring on Aug. 12. So a good quantity of meteors can be seen on nights both before and after that date.

The ZHR is reported to be about 80 to 100 but this year it is likely to be lower maybe 40 to 50 per hour because of the 80% Moon washing out some of the finer ones. On saying that though, the Moon doesn't rise until 22:42 and by then we will be starting to pack up. Also the Perseids are rich in fire balls!

We will also be picking them up using the Graves backscatter radio technique; this will take place whether it's clear or cloudy as the weather does not affect radio reflections.

Where to see the Perseids? As the name suggests, the radiant is in the constellation of Perseus, just below the constellation of Cassiopeia as the picture shows. The other point that may result in a lower ZHR is that we will be looking over Mansfield with all its lights.

I'm up at the obs all day as we will be doing some solar observing with both optical and radio astronomy in the 12GHz frequency. For those of you who are interested in radio astronomy, then please come up during the day and I'll demonstrate how we go about it.



We have a new untested recording device which I'm looking forward to seeing the results of the sun, clear or cloudy. I intend staying up there and will be setting up for Meteor watch as the sun sets. If you want to give me a hand, that would be great to see you.

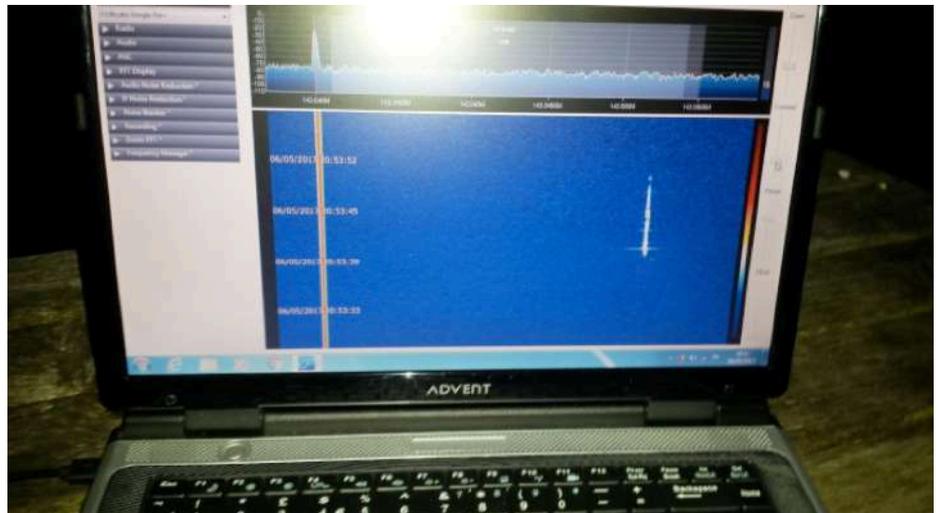
Other news, the main antennas were repaired and the Graves mast head amplifier was switched on, and what results we are now getting! A much higher rate of reflections are being recorded, with a far greater intensity.

Unfortunately the Brams reception has reduced to nil as the amp and filter were both burned out when the supply to them shorted out. It is intended to replace them both at the same time that the repaired All Sky camera is being reinstalled, hopefully later this month. Thanks to all the folk that helped with the mast repair work.



We have been on the road into deepest Derbyshire conducting an outreach project at a place called Great Hucklow. When I viewed the site, I didn't think it was very promising since the site had large trees in the SW direction, but I was wrong.

We had a large number of counts and one superb echo received using our portable mast and antenna. The group were most impressed.



The same set up was used at Pleasley Pit open day and the amount of echoes we were getting was amazing, I couldn't keep up with the recordings. It has become apparent that the most prolific counts happen in the mornings, with the least in an evening. These are of course sporadic meteor counts.

At present we still have some issues with getting access to the meteor computers over the internet, but we hope to have them resolved shortly. If you are intending coming to the Obs on the 12<sup>th</sup>, to take part in Meteor Watch, please let me know before hand as I will need to get supplies in, contact me at [radio@sherwood-observatory.org.uk](mailto:radio@sherwood-observatory.org.uk)

Best wishes Sparky.

## Easyfundraising

We have been collecting money by using the easyfundraising site for purchasing goods and the easysearch site for internet usage, so far we have raised £625. This is free money and is attained simply by using the easyfundraising site.

Whilst initial purchasing was good, we have fallen away in recent months. One possible reason for that is that this site can be accidentally blocked. Please see the following correspondence by John Ward:

*I still use the easyfundraising app for my Amazon purchases to help you along with your donations. I put an add blocker on my iPad some time ago and since then it has stopped my donations being recognised and has lost you some income. I have now added an exception in the blocker for the fundraising website and all is now well. Some of your members might use blockers not knowing the consequences, and you may need to make them aware so you don't lose any more money.*

Please check your devices, and please keep buying items via the easyfundraising website, not forgetting of course to search the net with the easysearch tool.

To join our cause please go to easyfundraising and follow the links.

Our cause is <https://www.easyfundraising.org.uk/causes/sherwoodobserv/>

Our search address is : [sherwoodobserv.easysearch.org.uk](http://sherwoodobserv.easysearch.org.uk)

A percentage of everything bought via the website goes towards our planetarium fund, there are hundreds of online shops such as Argos, Amazon and Boots. There's even a click and collect scheme at many retailers, there are also insurance comparison sites. Please help us raise free money by remembering to buy via easyfundraising whenever possible.

## **Society Meetings**

The monthly Society meeting is replaced this month with our annual BBQ please see this message from Phil:-

*As mentioned in the last Event Horizon, the annual summer BBQ is planned for the August society meeting again this year and that date has been set for the Saturday 19th. The start time will be 6pm and food should be ready by 6:30/7:00pm.*

*The pre-booking was successful last year, so I plan to do the same this year and I have several names on my list so far for people wanting to attend. Family and friends are welcome at the event and the cost for the night remains at £2 per head.*

*Doing this means that Sparky and his team will know how many people to cater for and there should be little or no wasted food.*

*Cooking will be done under the OCRA and if the weather doesn't suit outdoor seating, we can eat in the lecture room.*

*If you would like to come along, please let me or a committee member know and we will add your names to the list, but you will not be considered booked until the £2 pp has been paid and Scott will be taking over the collection after I go on holiday.*

*Regards, Phil.*

Upcoming Meetings

August 19th (Saturday) - Annual Summer BBQ.

September 26th - The Rise, Fall and Resurgence of Artificial Gravity - Martin Braddock, MSAS.

Members Astronomy Meetings

Diary for the upcoming month:

## Members Astronomy Meeting Diary

<b>Date</b>	<b>Presenter</b>	<b>Subject</b>
<b>August</b>		
<b>2<sup>nd</sup></b>	<b>Phil Randall</b>	<b>PPOD</b>
<b>9<sup>th</sup></b>	<b>Membership</b>	<b>Observatory Spruce Up.</b>
<b>16<sup>th</sup></b>		
<b>23<sup>rd</sup></b>		
<b>30<sup>th</sup></b>	<b>Mike Helanor</b>	<b>Globular Clusters</b>
<b>September</b>		
<b>6<sup>th</sup></b>	<b>Angus Wright</b>	<b>APOD</b>

## Public Events

There are two reports of our Solar Day event kindly provided firstly by Phil Randall and then Michael Lowe, photos are courtesy of Ron Peet.



Firstly Phil's Report:

*Many of you will be aware that the society held a Solar viewing open day yesterday although the sun itself proved a little elusive. Despite that, it was a very successful event for our 14 or so volunteers as we had 55 visitors in all, 3 of which were local councillors, and the sale of refreshments and merchandise with a few donations, made the society just a few pence under £60.*

*We are planning to hold a further event on Saturday 12th August and the official opening time is from 11am until 3pm, or later if the weather is good and we are busy. In order to run these events, we will be needing your help and hope you could find a few hours on the day. Members will be starting to set up the event from 10am and if you can't make the whole event, the odd hour here or there would be most helpful.*

*If you can help out, please place your name on the notice board in the lecture room or email Michael on [events@sherwood-observatory.org.uk](mailto:events@sherwood-observatory.org.uk) and he will be happy to have you along. If you have your own suitably filtered telescope, we would be happy for you to bring them along to help with public viewing. Sparky will be setting up the radio equipment and, as I'm sure you know, this date is also the peak of the Perseid Meteor Shower and he is hoping to pick up some signals during the day.*

*If anyone would like to know more about the meteor detection system, Sparky will be happy to go through the set up and workings as it happens. The Perseids are one of the best showers of the year and I believe the intention is for radio to remain set up into the evening to pick up the reflections and obviously, viewing will be available, weather permitting.*

*Thank you in anticipation.*

*Phil Randall.*



Secondly Michael's report:

*On Saturday 15 July, we held our first public event at the observatory. This took the form of a solar observation day. We had a total of 55 visitors (including 3 councillors from Ashfield District Council), and although they were not able to see the Sun due to heavy cloud, they were shown around a variety of our members' telescopes which were trained on various terrestrial objects. They also had the opportunity to "listen" to the sounds of the Sun's emissions and observe incoming meteors through our radio astronomy equipment. In the lecture room, they listened to a talk on the life cycle of a star, and given information on our planetarium project. This was backed up by "education boards" giving details of our nearest stars composition and life cycle. Each visitor was given a Sun factsheet when they left.*

*It was very heartening, in spite of the weather (it also spotted with rain on a couple of occasions – after all, it was St Swithin's Day, but I don't think it will rain for 40 days), to see everyone who had volunteered, come along, not only armed with their telescopes, but also with bags of enthusiasm. Dave Collins delivered the talk in the lecture room, and Steve Wallace supervised the education boards, as well as issuing and collecting the planetarium questionnaires. Nigel Cunnington tuned in the radio astronomy kit to the Sun and incoming meteors, and Phil Randall multi-tasked taking details of visitors, and selling refreshments and merchandise (he also had to sit down and mop his brow on a few occasions when he realised how much we could have made if we had charged our usual entrance fee).*

*On the pad, telescopes were supervised by Nigel Johnson, Rick Field, Steve Lawman, Gary Levers, Gary Woodward, Mike Helanor and Ron Peet. Val Barker spent time recruiting potential students for our night school sessions. Peter Jenkins took some excellent photos of the event (which have appeared on our Facebook page), and last, but most certainly not least, we were visited by Bernard Henin and his delightful family.*

*Thank you to all the members who gave up their valuable time to make the event, despite the poor conditions, a resounding success.*

*Our next solar day is on Saturday 12 August, probably a week or so after you have read this report, so it's not too late to volunteer your services.*

*Other public events happening over the next few weeks are:*

*2 September – Sutton on Trent Festival*

*9/10 September- Solar Day(s) at Pleasley Pit*

*24 September – Duffield Festival*

*30 September – Public Open Evening*

*Volunteers will be required for each. Please keep your eyes on the noticeboard, EH, and your in-boxes.*

*Thank you in anticipation of your help and support in the forthcoming season.*

*Michael Lowe, Public Events Coordinator. [events@sherwood-observatory.org.uk](mailto:events@sherwood-observatory.org.uk)*

### *Derbyshire Quaker Event*

There follows a report from Nigel Johnson about an event attend by himself and Nigel Cunnington:

### *Astronomy in Derbyshire*

*They say that life is like traveling along a road. Travel far enough and you are bound to encounter a section where the highway forks, and both directions offer boundless opportunities. Over the last several years I have encountered a few of these intersections, and the path selected has offered astronomical opportunities - literally. An example of this was a tour down the east coast of the USA. In Washington DC, my wife and I happened upon the Smithsonian National Air and Space Museum purely by chance. Here I saw mock-ups of a Luna Lander, the Apollo 11 capsule and a Moon buggy.*

*More recently my wife started attending a local Quaker group who meet in Mansfield. I used to attend church in my youth, but I'd not been for years. After the meetings, my wife*

would tell me what it had been like, and the description was totally different to anything I'd ever known from my experience of church. Intrigued I decided to go too, as I knew nothing of what/who the Quakers were. The only thing I could recall was the image from the porridge package. To my understanding the only link that Quakers have to the porridge oats brand is that the manufacturer uses the image to convey a meaning of quality and honesty, something the Quakers are well known for.

While chatting to the people attending the Quaker meetings you start to learn things about them, such as what their interests are. One thing they learned about me is my interest in astronomy. Like most people, they have had a passing interest in the subject, but had never had chance to look through a telescope, so my link with the observatory piqued the interest of many people who I spoke to.

As time passed I was notified that each year a residential weekend takes place in Great Hucklow, near Eyam, and that people from various Quaker meetings within the Derbyshire and Nottinghamshire areas attend. To fill the weekend, people who are willing to put on some form of entertainment are given opportunity to do so. This may range from some form of religious study, to something as unexpected as a session on Tai Chi. Guess who was persuaded into doing a short talk on astronomy?! The talk I gave not only looked at what was available in the sky that night, it also touched on the impact Quaker scientists had on the world. If I were to name one Quaker scientist it would be Dame Susan Jocelyn Bell Burnell. She was part of the team who first discovered radio pulsars in 1967.

It's one thing to talk about astronomy, but to give the full experience you also need to observe. To this end I approached various members of the observatory's committee and asked, very nicely, if I could borrow a couple of pieces of equipment. Graciously they allowed me to use a telescope and a solar filter. I was fortunate that the skies remained clear and offered people amazing views of Jupiter and the moon under quite dark skies. During the day there was an opportunity to see Sunspots. Below and right are a couple of photos from the weekend.

Using the equipment I had borrowed enabled me to cover some of the bases in astronomy, but not all. To this end I'll leave the rest of the story to a friend of mine, Nigel Cunnington, which he covers in his Meteor Watch report above.

Nigel Johnson (AKA Shorty).



Viewing the stars



*A short talk given by yours truly*



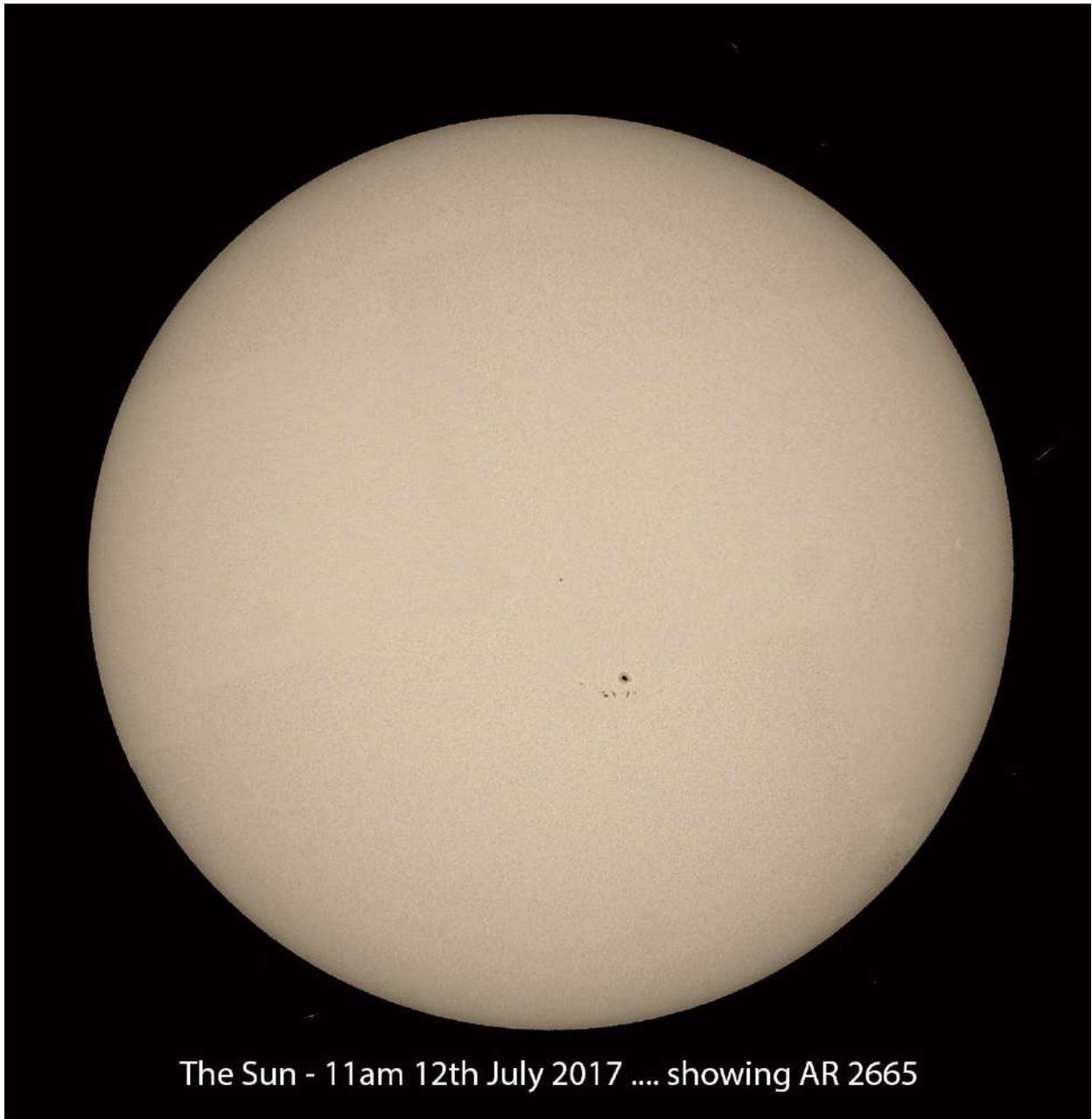
*Sparky and I talking to some of the other people at the residential*

## **Picture of the Month**

Congratulation to Mike Paling for his Picture of the Month for August. Details are as follows:

*The image was taken in white light with an APM 123/780 LZOS Refractor along with DMK AU21-618 Mono CCD Camera. It is a mosaic of approx 16 separate image frames which were then merged and blended using Photoshop CC with colour added.*

Further entries this month included the following two also from Mike:

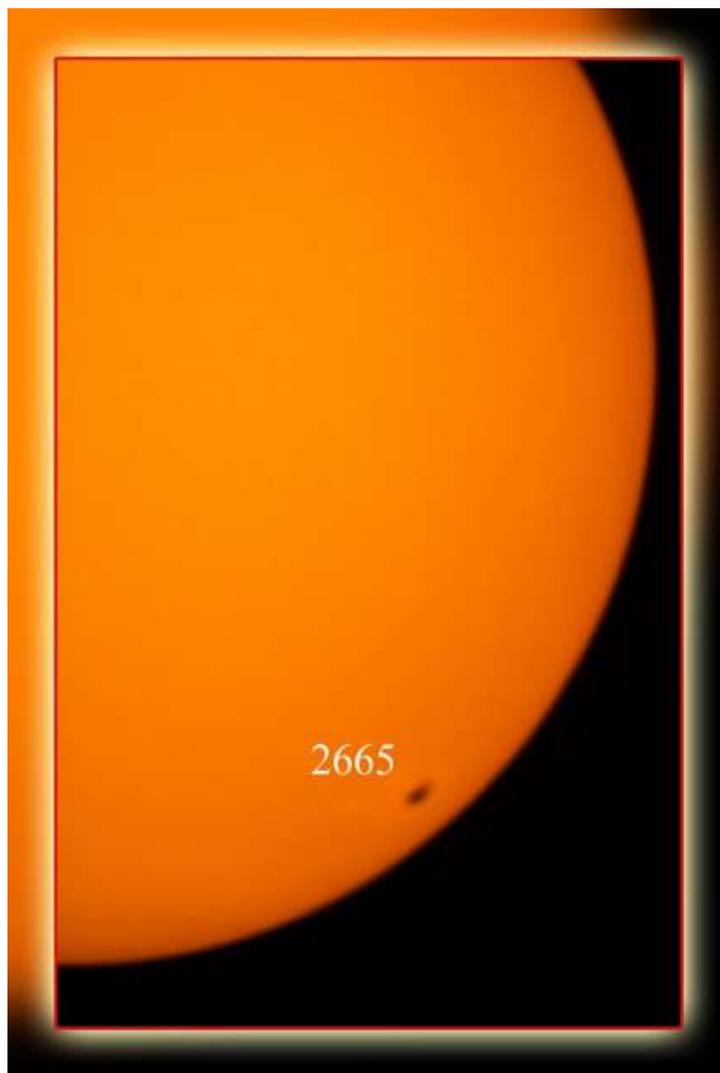




And the following entries were from Ron Peet:







Remember to send images for consideration to Phil at [treasurer@sherwood-observatory.org.uk](mailto:treasurer@sherwood-observatory.org.uk)

### Correspondence

We received this e-mail from Peter Jenkins, I'm sure you will join me in wishing Peter the very best of luck in this competition, it's a fantastic achievement even to be considered!

#### Royal Observatory - Insight Astronomy Photographer of the Year 2017

*'I am delighted to be able to let you both know that I am included in the shortlist for the above.*

*My picture of the Pelican Nebula (which is on the wall of the observatory at the moment) will be included in the published book of all the shortlisted and winning photographs.*

*I have been invited to Greenwich to the awards dinner on the 14th September and to the "Meet the Judges and press" brunch the following morning. Needless to say I'm excited to be included.'*

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Following the Wednesday talk by Dave Collins we received the following e-mail suggesting interest in a possible trip to Birr Castle in Ireland which of course houses 'The Great telescope':

*Tonight I made a short presentation of an itinerary to Birr with a 2 night stay and quite a few members indicated an interest. Would it therefore be possible to put a mention in the next EH asking those interested to let me have their names in order to build up a file with a view of organising trip?*

*There seems to a surprising number of members interested in this trip. There are a couple if amendments to what was shown last night.*

*It appears that a passport is not required for the ROI, however Ryanair state that passengers to Dublin will only be allowed to board if holding a valid passport and secondly the fare I showed last night appears to be incorrect. I had app. £30 return (a figure I picked up browsing over the weekend). Looking today the return fare is more like £98.....oops. Total cost would therefore be more like £220.*

*Dave Collins.*

Anyone interested in joining this trip please e-mail me, Chris Hook at the address at the end of EH and I will forward the information to Dave.

## **Contact Details**

Chairman, Chris Hook - [chair@sherwood-observatory.org.uk](mailto:chair@sherwood-observatory.org.uk)

Vice Chairman, I.T Specialist & Website Administrator,

Chris Dakin - [vicechair@sherwood-observatory.org.uk](mailto:vicechair@sherwood-observatory.org.uk)

Observatory Director, Craig Bradford - [obsdirector@sherwood-observatory.org.uk](mailto:obsdirector@sherwood-observatory.org.uk)

Deputy Observatory Director & Radio Programmer,

Nigel Cunnington - [radio@sherwood-observatory.org.uk](mailto:radio@sherwood-observatory.org.uk)

Secretary, Cathy Beaumont - [secretary@sherwood-observatory.org.uk](mailto:secretary@sherwood-observatory.org.uk)

Treasurer, Phil Randall - [treasurer@sherwood-observatory.org.uk](mailto:treasurer@sherwood-observatory.org.uk)

Public Events, Michael Lowe - [events@sherwood-observatory.org.uk](mailto:events@sherwood-observatory.org.uk)

Night Sky Courses, Val Barker & Nigel Johnson - [course@sherwood-observatory.org.uk](mailto:course@sherwood-observatory.org.uk)

Group Visits, Chris Hook - [visits@sherwood-observatory.org.uk](mailto:visits@sherwood-observatory.org.uk)

Groundsman, Jim Rowlands - [grounds@sherwood-observatory.org.uk](mailto:grounds@sherwood-observatory.org.uk)

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Newsletter Editors, Chris Hook & Matt Greenwood - [newsletter@sherwood-observatory.org.uk](mailto:newsletter@sherwood-observatory.org.uk)

## **Internet Links**

[www.sherwood-observatory.org.uk](http://www.sherwood-observatory.org.uk) - The homepage of the society.

[www.twitter.com/sherwoodobs](https://www.twitter.com/sherwoodobs) - The society Twitter stream.

<http://www.facebook.com/pages/Mansfield-and-Sutton-Astronomical-Society-at-Sherwood-Observatory/141550702600701?fref=ts> - The society Facebook page.

[http://en.wikipedia.org/wiki/Sherwood\\_Observatory](http://en.wikipedia.org/wiki/Sherwood_Observatory) - Our entry on Wikipedia.

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*We hope you have enjoyed this edition of the newsletter, don't forget if you would like to comment on anything or submit an article yourself for inclusion in the newsletter or come across a website of interest you would like to share then don't hesitate to contact the editors.*