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## The CHESTERFIELD ASTRONOMICAL SOCIETY

Newsletter May 2014

CAS website [www.chesterfield-as.org.uk](http://www.chesterfield-as.org.uk)

Registered Charity No. 514048

Secretary: Mark Eustace

Newsletter: Sue Silver

[newsletter@chesterfield-as.org.uk](mailto:newsletter@chesterfield-as.org.uk)

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Newsletter Editor – Sue Silver, Publicity Officer – Mark Eustace, CAS Webmaster – Simon Instone,  
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or £5.50 per month by Standing Order (10 months)**

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**Juniors members - (17 yrs and under) £0.  
(All juniors must be accompanied by an adult who must be a fully paid up member).**

Welcome to the May issue of the CAS newsletter.

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### CAS News

#### Haddon Grove Astrocamp

*This is from Georgina:-*

#### **Friday 28th March.**

All arrived within a short time of one and other, lunch time Graham Jenkinson (boss), Peter Davison, Dave Blackburn, Steve Page and I (Georgina Page) pitched up our tents for the weekend. Unfortunately the skies were a little (well like a lot) on the grey side and a good down pour of rain with the little occasional hailstone showers mixed in, did descend upon us over the next few hours.

Night time came and so did the clouds, no opportunity to do any observing, so a DVD was in order to watch in Pete's tent, for you who are old enough to remember, we watched Fireball XL5, (before my time) but it was great, you could see the strings and everything.

#### **Saturday 29th March**

After a hearty breakfast and what was looking like a pleasant start to the day weather wise, Peter mentioned he was taking a walk into Bakewell for a newspaper and asked if Steve and I would like to join him. How far is it I asked? Three miles each way he replied. OK, we'll join you I think we can manage that. We had a steady stroll into Bakewell, picked up a newspaper and a SAW (all will be explained later) feet up for 15 mins at a local coffee shop then we set off on our travels back to camp. THREE hours later and 7.89 miles with a blister to prove it we arrived back at camp. (Three miles there three miles back!!!! I'm sure made 6 when I went to school, not 7.89), (thanks to Pete's walking APP)

The forecast for the evening was looking slightly promising, so we set up our scopes and camera's ready to catch a glimpse of anything exciting that may appear in the night sky. As the evening drew in, Rob and his son Michael joined us with their observing equipment. Jupiter and its moons were nice and bright in the eye pieces also Orion's nebula, to name just a few objects viewed that evening. Three or four visitors from the camp site came and had a look at what we were up to. (Pete, I don't

remember you doing your guided tour this year). We had about a two hour window before the clouds rolled back in.

Dave had an unexpected visitor to his tent yet again. (For those of you who have read about our camping trips before you will remember Dave is no stranger to surprise pet visitors) This time according to Pete it looked like a Fox, but in fact as Dave went to shoo it out of his tent it was a \*\*\*\*\* big cat (panther lol). After a chit chat amongst ourselves an early night was in order seeing as the clocks went forward that night.

## Sunday 30<sup>th</sup>

Home time, after a very misty/foggy start to the day we all packed away to come home. Remember the SAW we bought in Bakewell, well last week Steve had brought me a chiminea for my back garden. Around the camp site are many trees with broken branches on the floor etc, so Steve collected/cut some of them up to fit into our trailer and brought them back home to burn on the chiminea ( as well as leaving the camp site tidy). So guess what I did on Mother's Day when I got back from camping I sat with my feet up in front of a roaring fire in my chiminea eating the chocolates given to me on Mother's Day. Perfect end to a great weekend. Thanks to all who joined us at camp. (Shame we lost at Wembley though)

Until the next camping trip, by for now Georgina. (Possible dates August)

*And right on cue Peter Davison tells us when this is:-*

The next camp will be on the week ending **Fri 8th Aug - Sun 10th Aug**. Once again the lending library for camping equipment will be open. Members who wish to go please let me know in plenty of time.

Contact Peter at [peterdavison45@virginmedia.com](mailto:peterdavison45@virginmedia.com)

## Mars and the Moon

A couple of pictures by **Graham Leaver**, thanks for these.



This one is by **Simon Moore**.



“It was taken on an Evostar 120ED (4.75" refractor) using a Canon 60D DSLR. I have no lens for this camera. I used a 12mm eyepiece and 3x Barlow lens (225 magnification). I had the camera’s ISO set to 1600 to keep the shutter speed lower which was set to around 1/30th of a second. I took 30 or 40 photographs and then stacked about 20 that came out the best using Registax to end up with the final image.”

*Great stuff, thanks for this Simon.*

These are taken by **Peter Davison**:





“The pictures were taken last Saturday night when I was down at Graham Jenkinson's observatory. Mars and Jupiter looked very good through his 12 inch reflector so we attached my webcam to his scope and took a few videos of both planets. All the videos taken were 1 minute long, then on Sunday I stacked the videos using Registax. The image on the left is a joint effort by Graham and myself. I emailed Graham a few of the images that I had stacked and he processed it a bit more to bring out more detail in it. The large Y shaped feature is Syrtis Major and the white patch

to the right of this is Hellas Basin, across to the left of Mars there is the polar cap and at the top of the picture you can see some white clouds.”

*Thanks very much for these and for your joint effort on the one above.*

## Coming up.....The Annual General Meeting

**Friday 2<sup>nd</sup> May** – Talk by Mark Eustace

This is on the Messier objects which Mark has recently revised. He is giving this talk at the Bakewell Birdwatchers on the 12<sup>th</sup> so please come along and give your support.

**Saturday 17<sup>th</sup> May** – Wingerworth Festival Day.

We will need helpers for this. Please let us know if you can attend and help out.

**The AGM is set for Friday 23<sup>rd</sup> May in the lecture room at 8pm.**

All members welcome.

**Sat 12th July - for the Wildlife Trust's 'Dawn 'til Dusk' event at the Avenue.**

Again for this please let us know if you can attend/help out.

## Things to see in May.....

**Friday 2<sup>nd</sup>** Globular cluster M31 in Hercules can be seen just over halfway up the sky due east around 23:00 BST at mag. +5.9.

**Monday 5<sup>th</sup>** The Eta Aquariid meteor shower peaks on 5-6 May. The shower has a peak zenithal hourly rate of 40 meteors per hour.

- Saturday 10<sup>th</sup>** Saturn comes to opposition today in the constellation of Libra. This is a great time to look out for the Seeliger effect (see below) which can make the rings look unnaturally bright for a few days.
- Tuesday 13<sup>th</sup>** The full Moon lies around 7° west (right) of Saturn in the hours running up to midnight.
- Friday 16<sup>th</sup>** Venus and Uranus are just over 1° apart in the morning twilight. At mag. -3.9 Venus will be easy to spot, but mag. +5.9 Uranus will struggle to make its presence known.
- Sunday 18<sup>th</sup>** Eighth magnitude comet C/2012 K1 PANSTARRS is very close to the mag. +3.7 Chi (ε) Ursae Majoris) tonight and tomorrow night in the early evening.
- Saturday 24<sup>th</sup>** A narrow but intense burst of meteors may occur as a result of Earth passing through the debris stream laid around the orbit of comet 209P/LINEAR.
- Sunday 25<sup>th</sup>** Mercury is at greatest eastern elongation today, placing it in view after sunset. This tiny world will be separated from the Sun by 23° and lies just within the eastern boundary of Taurus.
- Tuesday 27<sup>th</sup>** Now is the time of year to keep an eye out for noctilucent clouds. Look for them in the northwest a couple of hours after sunset or low in the northeast a couple of hours before sunrise.

### **The Seeliger Effect**

Saturn reaches opposition on 10<sup>th</sup> May, a time when it will be visible all night long. Through a telescope the planet looks resplendent with its north pole tilted towards us by 22°. This means that the rings now appear quite open and have their full grandeur on display. For the days around opposition the shadows that the ring particles cast on one another are hidden from view with the result that from Earth the rings appear brighter. This is the “Seeliger effect” and is very much worth trying to observe. This was named after Hugo von Seeliger (23 September 1849 – 2 December 1924), a German astronomer, often considered the most important astronomer of his day. The asteroid 892 Seeligeria and the lunar crater Seeliger were also named in his honour along with the brightening of Saturn's rings at opposition to acknowledge his pioneering research in this field.

## **Reminder.....**

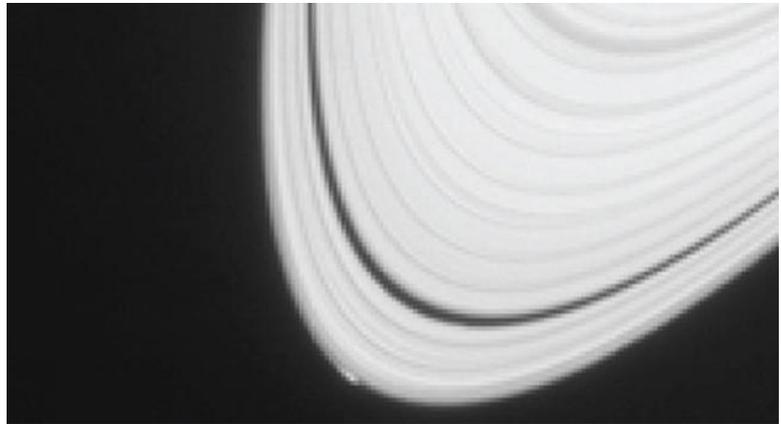
**Don't forget if you are ordering from Amazon please do it through our website. Mark McKeown has kindly set up the link to follow – this earns us commission!!**

<http://www.chesterfield-as.org.uk/>

## **ASTROSTUFF**

### **NASA Cassini images may reveal birth of a Saturn moon**

Images taken with Cassini's narrow angle camera on April 15, 2013, show disturbances at the very edge of Saturn's A ring -- the outermost of the planet's large, bright rings. One of these disturbances is an arc about 20 percent brighter than its surroundings, 750 miles (1,200 kilometers) long and 6 miles (10 kilometers) wide. Scientists also found unusual protuberances in the usually smooth profile at the ring's edge and believe the arc and protuberances are caused by the gravitational effects of a nearby object. Details of the observations were published online (April 14, 2014) by the journal *Icarus*.



The object is not expected to grow any larger, and may even be falling apart. But the process of its formation and outward movement aids in our understanding of how Saturn's icy moons, including the cloud-wrapped Titan and ocean-holding Enceladus, may have formed in more massive rings long ago. It also provides insight into how Earth and other planets in our solar system may have formed and migrated away from our star, the sun.

"We have not seen anything like this before," said Carl Murray of Queen Mary University of London, the report's lead author. "We may be looking at the act of birth, where this object is just leaving the rings and heading off to be a moon in its own right."

The object, informally named Peggy, is too small to be seen in images so far. Scientists estimate it is probably no more than about a half mile (about a kilometer) in diameter. Saturn's icy moons range in size depending on their proximity to the planet, the further from the planet, the larger and many of Saturn's moons are composed primarily of ice, as are the particles that form Saturn's rings. Based on these facts, and other indicators, researchers recently proposed that the icy moons formed from ring particles and then moved outward, away from the planet, merging with other moons on the way.

"Witnessing the possible birth of a tiny moon is an exciting, unexpected event," said Cassini Project Scientist Linda Spilker, of NASA's Jet Propulsion Laboratory in Pasadena, Calif.

According to Spilker, Cassini's orbit will move closer to the outer edge of the A ring in late 2016 and provide an opportunity to study Peggy in more detail and perhaps even image it.

It is possible the process of moon formation in Saturn's rings has ended with Peggy, as Saturn's rings now are, in all likelihood, too depleted to make more moons. Because they may not observe this process again, Murray and his colleagues are wringing from the observations all they can learn.

"The theory holds that Saturn long ago had a much more massive ring system capable of giving birth to larger moons," Murray said. "As the moons formed near the edge, they depleted the rings and evolved, so the ones that formed earliest are the largest and the farthest out."

## FUN STUFF

\*It is not conclusive yet, but NASA believes the Mars Rover has found proof of life on Mars. The CD player was stolen.

Don't grow up, it's a trap!

You can live to be a hundred if you give up all the things that make you want to live to be a hundred.

What is an astronomer? A night watchman with a college education (?!?)

Einstein developed a theory about space, and it was about time too.

At a recent exhibition a woman asked to have a look through one of the telescopes, the salesman pointed at some people a good distance away. The woman had a look and stood up in surprise and said "They look very clear and sharp but I can't hear them!"

That's all folks.



Sue (I'm not short, I'm concentrated!)

*This newsletter is sent out to all present members without whom the Society could not survive. Also to previous members and people with an interest in astronomy in the hope that they may wish to join/re-join the Society.*

*If you no longer wish to receive this newsletter by e-mail please let us know. Thank you.*

