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## The CHESTERFIELD ASTRONOMICAL SOCIETY

### Newsletter March 2015

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

Registered Charity No. 514048

Secretary: Marilyn Bentley

Newsletter: Sue Silver

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

President – Reinhold Gasser. Secretary – Marilyn Bentley. Treasurer – Graham Leaver.  
Newsletter Editor – Sue Silver. CAS Webmaster – Simon Instone. Committee Member: – Geoff Fell.

**Subscriptions - full membership £60  
or £6 per month by Standing Order (10 months)**

**Senior citizens (60 yrs and over) and students (18 yrs and over) £40  
or £4 per month by Standing Order (10 months)**

**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 March issue of the CAS newsletter

## CAS News

### Stargazing Live – 2015

This event is later this year planned to coincide with the solar eclipse on Friday 20<sup>th</sup> March. It will be showing on BBC2 from Wednesday 18<sup>th</sup> to Friday 20<sup>th</sup> March.

The Observatory will be open to the public on these three nights from 8 pm to coincide with the BBC2 programmes.

We are also open on the **morning** of Friday 20<sup>th</sup> March to view (hopefully) the solar eclipse. This will be between **8:30 am and 10:30 am**.

### Haddon Grove Astrocamp – 10<sup>th</sup> – 12<sup>th</sup> April 2015

*Peter Davison has sent this about the Haddon Grove Astrocamp.*

The camp will take place at Haddon Grove campsite, beginning Fri 10th April - Sun 12th April. As usual anybody wishing to attend, either camping or just coming down and observing at a dark sky site for the night would be welcome.

If anybody would like to camp for the weekend but don't have the equipment then I'll be opening the camping lending library, all I need is a couple of weeks notice so I can book you onto the campsite, also if you do decide to go and you have your own equipment then let me know in plenty of time so I can get you booked in.

Jupiter will be on show all night along with galaxies galore in the constellations of Leo, Virgo and Ursa Major. Towards the late evening (10:45pm, well past my bedtime) Saturn will be making an appearance along with the constellation of Hercules with its globular clusters M13 and M92.

I look forward in seeing you all there.

*Many thanks for this Peter.*

### Our Website

Don't forget to have a look at our new website. It has been expertly revamped by Mark Eustace. There are plenty of things to see and read. [www.chesterfield-as.org.uk](http://www.chesterfield-as.org.uk)

## Visits to the Observatory

We have (and are still having) our usual stream of youngsters, Cubs, Guides, Brownies, Scouts etc. coming to the Observatory to look through the telescope and for talks. We have a total of 15 groups over approximately 6 weeks! Most of these talks have been given by Mark Eustace who has done a sterling job with other talks given by Peter Davison and Sue Torry. Mark has also managed to squeeze in some off-site talks amongst these at the Observatory with support from Peter and Rob McGregor. A big thank you to these people and to “dome helpers” including Peter (again) and Rob.

## Photo Gallery.....

*It's still with us!*

These pictures of Comet Lovejoy from Graham Jenkinson taken on 31<sup>st</sup> January.

“.....its only a 1 minute 20 second total exposure time 4 frames . It clouded over !”



The Boss has been busy again. This was taken about 8 pm on the 16<sup>th</sup> Feb.

“.....Its starting to get fainter now and the tail is too”.

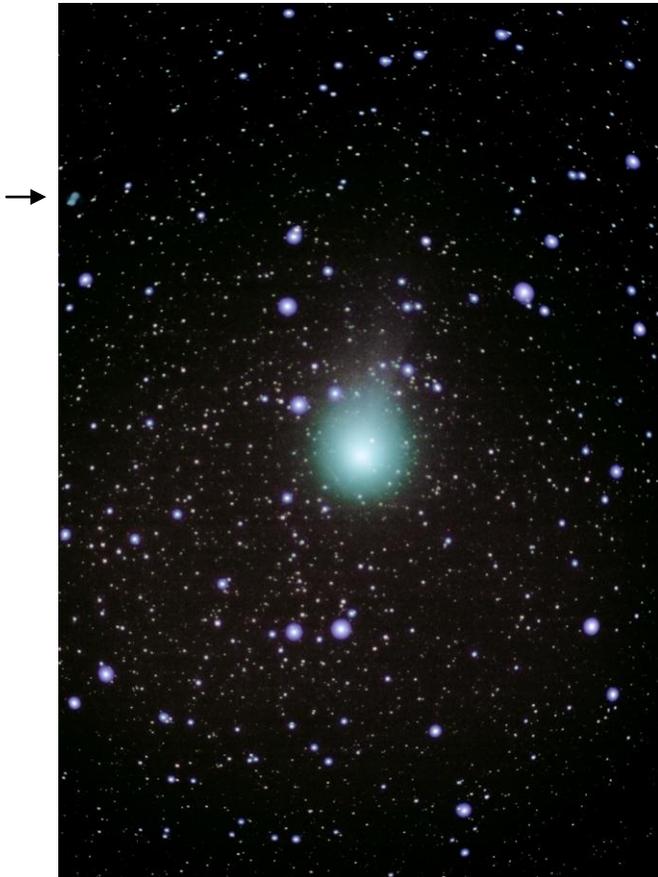
Still a good one Graham, thank you. (Picture left)

This is the same picture but the one on the right Graham has altered the colour balance and cropped it.



*They are both good, I could not decide which one to put in, so they are both in!*

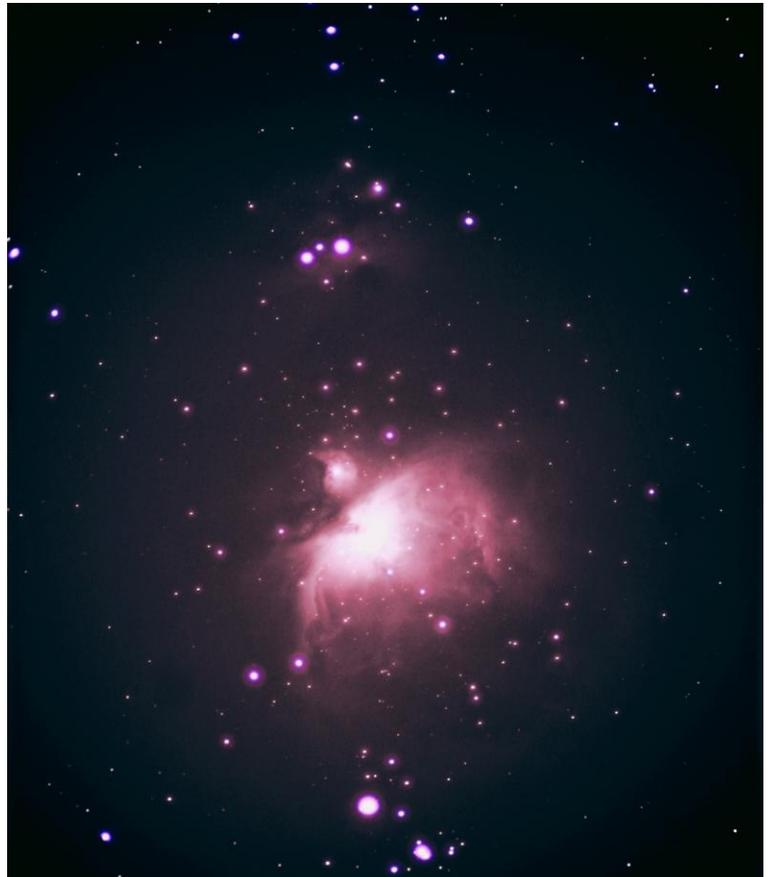
These were also taken by Graham Jenkinson, Saturday 22<sup>nd</sup> February.



Comet Lovejoy

Graham has pointed out if you look "...top left hand side of the photo it looks like two stars very close together" it is Messier 76, The Little Dumbbell nebula.

Here it is enlarged  
Taken with Graham's 12 inch telescope.



The Orion Nebula



## Things to see in March.....

- Sunday 1<sup>st</sup>** Galilean moon Europa will pass across the face of Io between 04:39 and 04:15 hrs. Mid occultation occurs at 04:12 hrs when Europa will be concentrically located within Io's disc. Jupiter will be 19° up in the western part of the sky at this time.
- Monday 2<sup>nd</sup>** Saturn's moon Iapetus is approaching greatest western elongation. Iapetus always appears brighter when it is to the west of the planet.
- Wednesday 4<sup>th</sup>** The brightest naked eye planet meets the dimmest this evening. Venus and Uranus will be visible low in the west after sunset. Look for Venus around 20:00 hrs; the star-like dot 6 arcminutes below and slightly left of it is Uranus.
- Wednesday 11<sup>th</sup>** Mars and Uranus meet this evening. The pair are best seen against a dark sky at 20:00 hrs but they will only be around 3° up in the west. They will be 17 arcminutes apart, nearly three times the distance between Uranus and Venus on the 4<sup>th</sup>.
- Saturday 14<sup>th</sup>** Lunar libration favours the southwest limb of the Moon from 10-16<sup>th</sup> March. The best view of the region which contains the fabulous Mare Orientale will be had in the early hours of this morning.
- Tuesday 17<sup>th</sup>** The delicate constellation of Coma Berenices is well placed around midnight. It contains a number of beautiful deep sky objects including naked eye open cluster Melotte 111, 7<sup>th</sup> magnitude globular M53 and the superb edge-on galaxy NGC 4565.
- Wednesday 18<sup>th</sup>** The intriguingly named Realm of Galaxies is well placed around midnight and with the Moon out of the way this is a great time to try out some galaxy hopping. A small scope will typically show many of the brighter ones as smudges.
- Friday 20<sup>th</sup>** A partial solar eclipse can be seen from the whole of the UK between 08:15 and 10:50 hrs. Actual start and end times will vary slightly with location.
- The spring equinox occurs at 22:45 hrs.
- Saturday 21<sup>st</sup>** A delicate 2% lit waxing crescent Moon sits 2.3° to the west of Mars this evening though the tilt of the sky means that it will appear below and slightly to the right of the planet. View them from around 19:30 hrs.
- Sunday 22<sup>nd</sup>** There is a lovely view of mag. -3.9 Venus and an 8% lit waxing crescent Moon in this evening's sky over towards the west. They will be less than 4° apart and best seen after 19:00 hrs.

**Tuesday 24<sup>th</sup>**

Lunar libration is favouring the northeast limb at the moment bringing features such as the Mare Humboldtianum into view.

Ganymede will partially occult Callisto between 00:10 and 00:18 hrs.

**Sunday 29<sup>th</sup>**

**The clocks go forward by one hour at 01:00 UT marking the start of British Summer Time (BST).**

**Monday 30<sup>th</sup>**

Tonight the 81% lit waxing gibbous Moon sits 8.5° southeast of Jupiter and they form a triangle with mag. +1.4 Regulus. This impressive celestial geometry can be seen as soon as the sky begins to darken, halfway up the sky looking south.

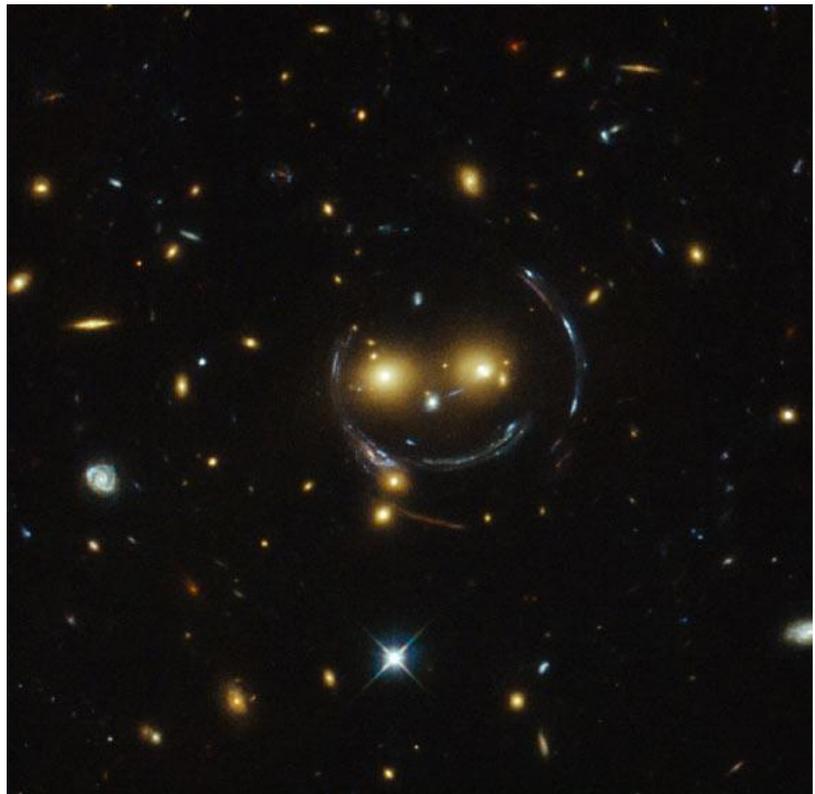
## **ASTROSTUFF**

### **NASA's Hubble Space Telescope Captures Smiling Galaxy Cluster**

**An unusual galaxy cluster called SDSS J1038+4849 appears to smile at us in a newly-released image from Hubble's Wide Field and Planetary Camera 2 (WFPC2).**

This 'smiling face' resides in the constellation Ursa Major. It was spotted by amateur astronomer Judy Schmidt, who submitted a version of the image to the Hubble's Hidden Treasures image processing competition.

The two eyes are the distant galaxies SDSSCG 8842.3 and SDSSCG 8842.4. The smile lines are, in reality, arcs caused by an effect known as strong gravitational lensing. Massive structures in the Universe exert such a powerful gravitational pull that they can warp the space-time around them and act as cosmic lenses which can magnify, distort and bend the light behind them. This phenomenon, crucial to many of Hubble's discoveries, can be explained by Einstein's theory of general relativity.



In this special case of gravitational lensing, an Einstein Ring is produced from this bending of light, a result of the exact and symmetrical alignment of the source, lens and observer. That's why astronomers see the ring-like structure.

NASA's Hubble Space Telescope has provided astronomers with the tools to probe these giant objects and model their lensing effects. Because of this, they can peer further into the early Universe than ever before.

## FUN STUFF

*(I have recently started working in the deli of a grocery store.)*

**Me:** "Hello. How are you today, madam?"

**Customer:** "Hi, I would like some ham please."

**Me:** "Certainly, and how much of the ham would you like?"

**Customer:** *\*thinking\** "Um... I'll take about a quarter — no! I'll take less than that. I want more than a third of a pound, but no more than one quarter pound!"

*(I tried my best not to laugh at the fact that a third is actually MORE than a fourth (difference between 0.33 and 0.25 respectively). I ended up slicing her one fifth instead. No wonder there's a maths joke saying that '5 out of 4 people have a problem with fractions!')*

That's all folks.

Sue



*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.*