Programme for February & March

Date	Time	Location	Subject & Speaker
Thu Feb 6th	19:45	Club Room	**"Celestial Navigation"** *Steve Taylor*
Fri Feb 7th	19:45	Observatory	**PVE** *Les Marsden*
Sat Feb 8th	18:00	Wentworth Castle	**Stargazing Live Event** *Les Marsden*
Thu Feb 13th	19:45	Club Room	**Back to Basics** *Paul D'Silva*
Thu Feb 20th	19:45	Club Room	**"Ice Worlds of the Solar System"** *Paul Money*
Sat Feb 22nd	18:00	Clifton Park	**Stargazing Live Event** *Les Marsden*
Thu Feb 27th	19:45	Club Room	**"Spring Sky"** *Trevor Worrall*
Fri Feb 28th	19:45	Club Room	**"Johannes Kepler"** *Dr Allan Chapman*
Thu Mar 6th	19:45	Club Room	**"Observing Jupiter"** *Roy Gunson*
Fri Mar 7th	19:45	Observatory	**PVE** *Les Marsden*
Sat Mar 8th	15:00	RSPB Old Moor	**Nature & Nebulae II**
Thu Mar 13th	19:45	Club Room	
Thu Mar 20th	19:45	Club Room	**"Astrophotography"** *Dr Steve Barrett*
Thu Mar 27th	19:45	Club Room	*Nothing at time of publication*

Old Moor RSPB – Manvers Way, Barnsley, S73 0YF

Wentworth Castle, Lowe Ln, Barnsley, S75 3EN
Wentworth Castle is a grade I listed country house, the former seat of the Earls of Strafford, at Stainborough, near Barnsley

PVE – Public Viewing Event

Web site: http://msas.org.uk
Meeting room is at Swinton Working Men's Club, Station Street, Swinton, South Yorkshire, S64 8AU.
Observatory is at Lee Brook Lane, Hoober, S62 7SH
Mexborough & Swinton Astronomical Society is Registered Charity N° 1064103 in England & Wales

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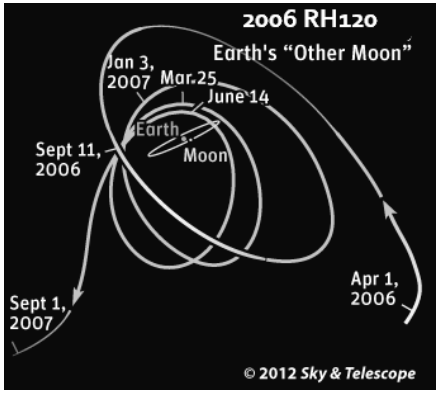
For submissions to The Messenger - Editor: Roy Gunson: royg@gmx.co.uk

The Messenger

Mexborough & Swinton Astronomical Society February 2013

Earth's Other Moons?

Asteroid 3753 Cruithne is in an orbital resonance with the Earth. It has a highly eccentric orbit, but takes exactly one year to orbit the Sun. From our perspective, it follows a slow, horse-shoe shaped path across the sky.
There is no danger of a collision with Earth for millions of years, if ever. Its orbital path and Earth's do not cross, and its orbital plane is currently tilted to that of the Earth by 19.8°. Cruithne, having a maximum near-Earth magnitude of +15.8, is fainter than Pluto and would require at least a 12.5-inch reflecting telescope to be seen. In fact, Cruithne doesn't even get particularly close to the Earth: at its closest approach it only gets to within 0.1 astronomical units. The asteroid will not get any closer to us than 0.3 astronomical units in the near future. Each year, it is at its closest in the autumn and at this point it will pass almost directly beneath the Earth's South Pole. Cruithne orbits the Sun in about 1 year but it takes 770 years for the series to complete a horseshoe-shaped movement around the Earth. Even though the mean distance from the sun of Cruithne is 1 AU it actually approaches 0.48 AU at perihelion (closer than Venus) and recedes to 1.51 AU at aphelion (Further than Mars!)



More resonant near-Earth objects (NEOs) have since been discovered. These include 54509 YORP, (85770) 1998 UP1, 2002 AA29, and 2009 BD which exist in resonant orbits similar to Cruithne's.

2010 TK7, the Earth's only known Trojan asteroid. It leads the Earth in the exact same orbit around the Sun, in a gravitationally stable point in space.

The Earth did capture a 5-metre asteroid called 2006 RH120. It orbited the Earth four times during 2006/2007 before getting ejected again. It may again become a four orbit moon in 2028!

THE THOUGHTS OF CHAIRMAN LES



This is your Chairman Speaking! Our society is going from strength to strength and I think it shows in our PV and activities programme. You will all know about our join event with the Library at Riverside Astrophotography & Space Artefacts Exhibition January 2014. We had on display deep space images and our Skylark rocket together with some of items from the rockets payload that were used in those early heady days out at the Woomerra launch site. All this material and the rocket were possible by the late Prof John Parkinson of Sheffield University who we had as a guest speaker quite a few times and he became a very good friend of the society. The Astro deep sky images are all taken by members of the society and very good they are too. On Wednesday 29th January our very own expert Tony Morris gave a talk and presentation about the subject and the exhibition in general.

We are extremely busy with our Out Reach Programme with our Public Viewing Evenings and many other activities throughout the year; see our Community Access Programme information sheet. We are running joint ventures again with the RSPB at the old Moor Nature Reserve Wombwell and also at Wentworth Castle; both these venues are always well attended. Our Solar Sundays are to continue at the observatory and RSPB.

I would like to put it to the membership asking if anyone would like to try doing a short talk to us. It doesn't have to be anything too difficult; your favourite subject in astronomy would be a very good starting point. If you need any help with a PowerPoint presentation or any other part of your talk we will give you as much help as you need. What we, the committee and I'm sure yourselves, would like to see are a few different faces up at the front of the room giving a talk, come on give it a try it will be another string to your bow.

We would like to see is more of our members taking tuition on the main telescope at the observatory to help you get more quality observing and make your hobby of astronomy a little more interesting. Anyone wanting tuition let any committee member know and if there are enough people interested a couple of our more experienced members will agree a day and time to suit everyone and you can then get started.

I wish you clear skies

Les Marsden FRAS

Chairman

Trevor Worrall's February Skies

Planets .. Where are they ?

Mercury : Visible for the first few days of the month just above and to the left of the setting sun. On the 4th Mercury will be close to Neptune

Jupiter : will be a great target for telescopes this month found in or near the constellations Gemini in high in the South West , and will be brilliant all night.

Venus: Low in the South East just before sunrise. **Mars** : rises in Virgo before midnight

Saturn : rises in the South East after 1:00am and reaches 20 deg by 05:00

January Moon : New 30th Jan , 1st Quarter 6th, Full 14th, Last Quarter 22nd .

Constellations: making an appearance during spring are Bootes, Cancer, Crater, Hydra, Leo and Virgo. Moon occults λ Geminorum on the 11th February. Unusually there is no New moon this month.

If you are interested in bright stars this is the season with the Orange giant Arcturus in Bootes, The blue super giant Spica in Virgo and Regulus in Leo, one of the brightest stars in the night sky. For astrophotographers the Leo trio some 7 degrees from Denebola would be a great target with its relatively new supernova SN2013AM located in M65.

Nature & Nebulas @ Old Moor RSPB January 11th 2014



What an event it was don't you think? The sky was clear, the telescopes were there, the crowds were there what more could we ask for?

I feel sure that we can say that it was a total success yet again. . We were shown a new, and some said better, observing area to save us getting bogged down as we had had so much rain recently. The 'scope area was swamped in a different way – by people queuing to us the 'scopes. I didn't get around to witness this phenomena as I was extremely busy with the presentations in the classroom, I'm pleased to say that I was kept nourished throughout and had a great time – I love a captive audience – and I have to say that everyone said how much they had enjoyed it.

Les Marsden

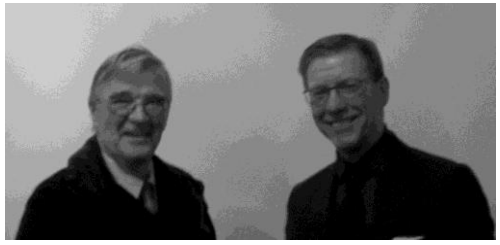
Fundraising.

As a member of our wonderful society I am sure that you would wish to help with fundraising. If you do not already know there is an easy way if you shop on line.
Shopping on Amazon.
To shop on Amazon and raise money for our society every time you do just go on to our website at **www.msas.org.uk**
Near to the bottom of the home page you can see a blue coloured box saying AMAZON.co.uk. Click in the box and it will take you to AMAZON. You can now log in and shop as you normally would. Nothing else to do. AMAZON will donate 5% of your spending to MSAS.

Shopping with Easyfundraising.
To shop with easyfundraising and raise money for our society you must first register to support Mexborough & Swinton Astronomical Society.
Go to the webpage http://www.easyfundraising.org.uk/causes/masas/?u=5IAVMM and it will take you to the easyfundraising website. Click on the green box SUPPORT US NOW you need to register before you can use the site.
Once you have registered you can shop to your heart's content and raise money for MSAS at the same time. The difference with this site is that you must log in via easyfundraising each time you want to shop. From easyfundraising you can chose many different online retailers, each of which will donate a percentage to our society. Give it a try it's easy!
REMEMBER if you want ***AMAZON*** go via our website as we get more that way.

Steve Taylor

Our January guest Speaker



David Adshead, gave a talk on Astrophotography from the Kingfisher Observatory. A talk on the problems encountered when doing deep space images and having to compete with the local train network passing yards from his observatory in Doncaster. Some nice images and an interesting discussion ensued.



Members of the 169th Kilnhurst Cub troop recovering after an enjoyable lecture on Astronomy by our Chairman

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PUZZLE

What happened on 2 February 2000 for the first time since 28 August 888?

THE CHRISTMAS PUZZLE ANSWER

Gary left at 1am and used a Celestron capture Jupiter and the Orion Nebula
Alan left at 4am and used a Skywatcher to capture Neptune and the Ring Nebula
Mick left at 3am and used a Tasco to capture Mars and the Crab Nebula
Roy left at 2am and used a Meade to capture Venus and the Cat's Eye Nebula
Tony left at 12am and used a Takahashi to capture Saturn and the Omega Nebula

Supernova in M82, the Cigar Galaxy

One of the closest star explosions in nearly 27 years was discovered this week by students and staff at the University of College London, and the supernova can be easily seen by stargazers equipped with a moderately large telescope.

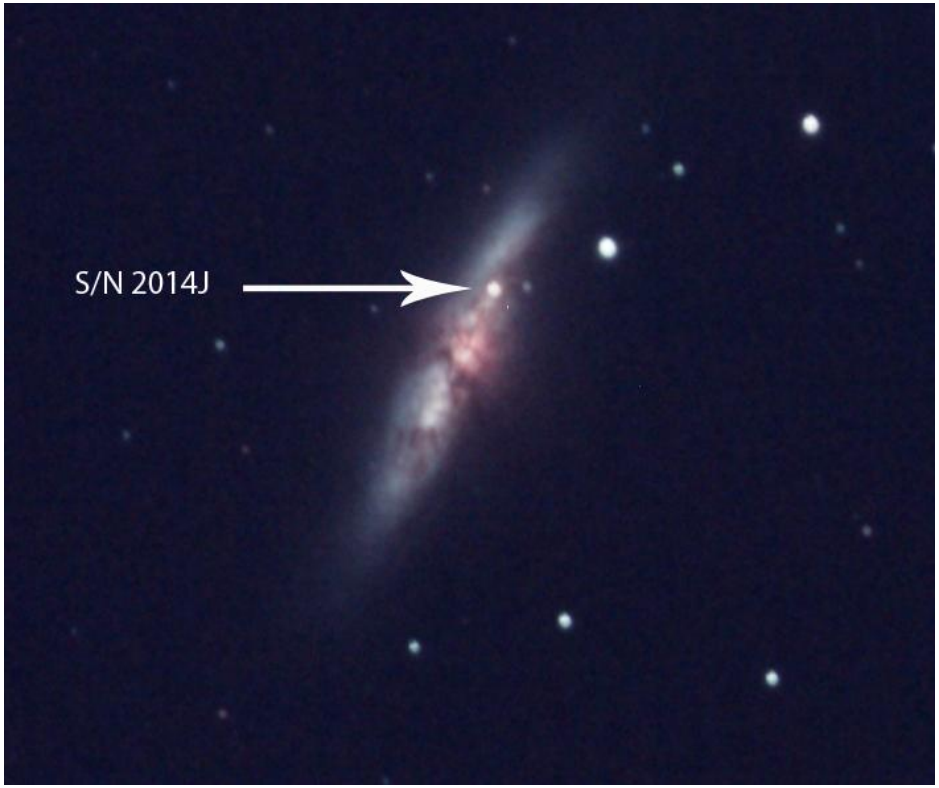


Image taken by club member Mike Scollan, January 23rd from the Hoober Observatory using the Takahashi TOA 130.

Early on the evening of Jan. 21, a team of students assisted by astronomer Steve Fossey, spotted the new supernova in nearby galaxy Messier 82 (M82), popularly known as the "Cigar Galaxy."

Messier 82 is a nearby starburst galaxy about 12 million light-years away in the constellation Ursa Major. The starburst galaxy is five times more luminous than the whole Milky Way and one hundred times more luminous than our galaxy's center. The starburst activity is thought to be triggered by interaction with neighboring galaxy M81.

To find M82, use the bowl of the Big Dipper. Extend a diagonal line from Phecda — the bottom left star in the bowl — up to the upper right star in the bowl, which is called Dubhe. Extending that line out at a similar distance between these two stars will bring you to the general vicinity of the two galaxies M82 and M81. M82 is positioned to the north of M81.

It is a type 1a supernova which is caused by a binary system containg a white dwarf star which is accreting material from a larger companion. When the mass of the white dwarf gets to a certain limit allowing carbon fusion a runaway event takes place and a supernova results. The peak luminosity of these events is relatively constant and they can be used to measure galactic distances.

