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NEXT MEETING

THURSDAY, 18th September 2014

THE ASTRONOMICAL SOCIETY OF HARINGEY

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www.ashastro.co.uk

SOCIETY NEWS

MEETING VENUE

Music Block, Ashmole School, Southgate, London N14 5RJ.

The day for meetings is usually the third Thursday of each month. The exceptions are August, when we do not hold a meeting, and this now currently applies to the July and December meetings, though that may alter in the future?

However, in case of changes, it is always advisable to double-check the dates below.

IMPORTANT

Remember the change of meeting room.

See the next page

For more on this, and general meeting information, also check the website:
www.ashastro.co.uk. Latest update July 2014

A Facebook page is being set up. It will be in 'Groups', under 'ASHastro'

Doors open - 7.30pm : Main speaker - 8.00pm : Finish - 10.00pm sharp!

New or updated information is in *italics*

2014

Below are the currently scheduled dates for this year.

Confirmation as to which meetings will be held are due to be announced after the next Committee Meeting.

Most meetings will also end with a round-up of 'What to View in the Night Sky' for the following month. This is a continuation of what you get in the Night Sky pages here.

July 17th : *Extended Summer Break*

August : Summer Break

September : 18th : *Mat Irvine : "Space at Farnborough" - TBC*

October 16th : AGM

November 20th : TBA

December : Probably no meeting this month

COVER:

This is the time of the year for NCLs - noctilucent clouds. These are the high-flying clouds with a silvery blue appearance, the name meaning 'night-shining'. They are the highest altitude clouds at around 50 miles / 80 kilometres, so really are at the edge of space. They are seen to the north after the Sun has set and can appear over many hours, up to, and even past, midnight. However even in what may appear ideal situations, their appearance is not guaranteed and can vary greatly. Their origins are still not understood and they appear only to have been seen - or recorded - in recent centuries. They have been linked to volcanic eruptions or most recently to man-made conditions or climate changes. Alternatively it could be something completely different...

SOCIETY NEWS MEETING ROOM



We currently meet on the first floor of the Main Music Block. This is the two-storey building, next to our original room, the original Music Room. This is marked with the X in the photo on left, and although it is demolished, the site is currently being redeveloped with a new structure. The route in red is shown from the main gate of the School. We hope a first floor will be suitable for all, as there isn't a lift. If anyone feels they will have difficulty, please let the Chairman know.

Contact details on back page.

MEETING PREVIEW : 17th September 2014

It has been decided to cancel the July meeting, and run it into the existing August break as an 'extended summer break'. This is confirmation of what has been on the website for several months anyway.

There is a Committee Meeting planned to be held when the Chairman returns to this country. This would have happened before now, but there has been a major problem of co-ordinating a suitable day for the majority of Committee members! However when it finally takes place, (tentatively planned for some time in late August!), discussion of the structure and future of the Society will take place, and the provisional schedule for the September meeting can be confirmed.



But remember time off from meetings, still means you can take time out to view the skies! Wherever you are in the world, you are bound to see something. This picture (right) of crepuscular rays was taken by me in North Dakota, while the crescent Moon was shot by Chairman Jim in Greece.



Mat

MEETING REVIEW : 19th June 2014

Jim Webb & Alister Innes : “Looking Up”

The meeting got off to a good start with four telescopes being present which about matched the members present! But no problem, it became an impromptu ‘Master Class’ of how to set up telescopes.

Three of the ‘scopes were polar mounts – and one had never been properly set up. A remarkable skill set became apparent as virtually everyone present had a significant contribution to make. This ranged from tips on setting up the polar mount to balancing the weights of the telescope mountings for smooth movements on both axes. Then there was collimation of the optics on Newtonian telescopes and how to line up a spotting telescope and much more.



Discussions on the finer points of setting up and observing ensued and finished off with an impromptu short talk, by Jim, on optics and large (and larger...) telescopes.

A very productive evening was rounded off by a few drinks at The New Crown pub – the current ‘après talk’ venue.



SPACE NEWS

THAT ONE SMALL STEP

July 2014 is of course the 45th Anniversary of the first human step onto the Moon, with the Apollo 11 Moon landing. The landing itself was at 20.17hrs UTC / GMC, but the first step into the Lunar surface by Neil Armstrong was not until around five hours later, at 02.56hrs UTC / GMT on 21st. However in Houston, (from where the Mission was controlled after the launch), it was six hours behind GMT, so as far as they were concerned it was still the 20th July. Hence any answer to the traditional pub quiz question as to "What day did Man step onto the Moon?" has to be caged in additional qualifications. Consequently it would almost certainly not be considered as a suitable question on Mastermind!



IS THERE SPACE IN LOTTO?

There's an intriguing entry in the National Lottery Awards for this year. Picked out of 750 entries that will go to a public vote, this is StarDisc designed by Aidan Shingler. It is in the form of a 12 metre /40 feet diameter star chart carved into black granite chosen to evoke the darkness of deep space. The carved detail mirrors the northern hemisphere's night sky and includes the constellations and the Milky Way. Contrasting with this is a perimeter of silver granite with 12 seats denoting the months. StarDisc was launched on September 10th 2011, after a six year build up. The opening celebrations included an outdoor screening of *Close Encounters of the Third Kind* and a specially recorded message from Sir Patrick Moore.



StarDisc is a combination of an open-air theatre and 21st century stone circle. By night 72 lights illuminate the StarDisc, powered by our nearest star, the Sun. Besides as attracting visitors to purely view the design, StarDisc is an ideal venue for drama, music and astronomical events.

It is situated at Stoney Wood, Wirksworth, Derbyshire, DE4 4EN, UK, Earth. The StarDisc commands stunning views over the Ecclesbourne Valley and is open to everyone, 24hrs a day, all year round.

You can vote for StarDisc to receive the award, worth £2000, on www.lotterygoodcauses.org.uk/project/stardisc or telephone 0844 836 9676. Follow the campaign on twitter: #NLAwards. Voting runs until midnight on Wednesday 23rd July. For additional information about the StarDisc project visit: www.stardiscenterprise.co.uk

CHAIRMAN'S QUARTERS



I am currently in Greece, writing this under a very cloudy, rainy and brilliantly thundery day – extremely rare for this time of the year but getting more frequent!

Greeks tend to be very patriotic and during a recent conversation, I was informed of the NASA launch of LambdaSat, a Greek designed and built satellite. This two kilo satellite was sent to the ISS by one of the unmanned supply vessels, and then launched from the Japanese airlock. Its purpose is to track Greek shipping in African waters to warn them of possible pirate attacks. It is a very proud moment for the team leader, Pericles Papadopoulos, who is an astrophysicist and Professor of Aerospace Engineering at the University Of San Jose, California. He originally hails from Kalamata in Greece and has been working with NASA on the Mars lander projects over the last 10 years. He describes his exclusively Hellenic team from around the world, as, "Greek minds at work".

On the Mars note, a recent conversation got some more 'Greek minds to work'! Delightful conversations can arise over some simple food and a lot of tsipouro (a variant of ouzo without the aniseed) by the beach. We had been talking about possible forms of transport into space using current notions of 'warp drive' which now appears to have a plausible mathematical basis and is being seriously explored by NASA. A recent article I had read, presented "evidence" that NASA actually had a warp drive! This was based on an interview by Gene Cernan – the last man to stand on the Moon. In it, Gene was talking about future Moon landings and mentioned Buzz Aldrin about whom he (accidentally?) said, "Buzz really wants to go back to Mars"! This was wonderful fuel for conspiracy theorists who now claim that NASA is regularly, and secretly, sending people to Mars! Having got the travel part out of the way we now proceeded to work out what to do once there.

What to live in is the trickiest part. The first question was how to deal with the 500mph winds! I'd fallen for that 'problem' for quite some time until our regular speaker, Jerry Stone, very kindly corrected me by pointing out that the Martian atmosphere is actually very thin so the actual effect is that of a gentle breeze! So, that out of the way, the next question was what to build. One of the Think Tank' is a civil engineer whose first response was, "Let me give you a quote and then we'll talk about it!". This is current Greek financial situation talking. This really turned out to be an interesting problem – what to live in. Taking your home with you from Earth to Mars is a major issue if we are to use conventional rocket fuel. It has to withstand the conditions of interplanetary space, plus protect and feed the crew of 6 to 12 people. Then it has to be landed – safely. Once there, it has to have carried tools, equipment and some raw materials to help maintain and even expand the habitat. This where the civil engineers come in – what materials are available on Mars for use to build some kind of 'house'.

Even though Mars receives about 43% of solar radiation than we do, it does not have our thickness of atmosphere so the radiation levels will be almost those encountered during the journey there! On top of that there is cosmic radiation! The Martian surface seems to have a lot of iron sesquioxides – formed over centuries of ultraviolet light exposure. These are affectively iron rust with extra oxygen added, a bit like a solid ozone layer and as corrosive as ozone! The constructions will have to be 'radiation hard' but fortunately the lower Martian gravitation reduces the stresses on necessarily thicker buildings. To build, first the ground has to be cleared. Then one has to build some mini-factories to extract iron and make something resembling cement. Fortunately there are rocks galore, so walls can easily be built without the need for bricks. Roofing is another matter, but not insurmountable. What other natural materials are available for other uses is yet to be determined. The skills of the crew will have to be multiple as there will be many challenges to be dealt with. Time will tell how these Mars missions will evolve but no doubt there will be much video and pictures sent back to Earth for our perusal on the Internet - or whatever medium exists by then.

See you in September.

JIM

THE NIGHT SKY : THE PLANETS

July - September 2014

MERCURY : The planet was at inferior conjunction (between the Sun and the Earth) on June 19th, moving into the morning skies. It reached greatest western elongation on July 12th, around magnitude +0.4. Mercury is near to Venus for much of July, but really too faint to find until later in the month, when the planet moves closer to the horizon as the month progresses. Best chance of viewing is 25th July when it is close to both Venus and the Moon, when it will be above and left of the crescent. The magnitude increases to around -1.4 as we move into August. Will be at superior conjunction (the other side of the Sun) on 8th August. Moon to north on 27th August.

VENUS : Still brilliant at magnitude -3.9 in the morning skies. Crescent Moon close by on 24th and 25th July, (and Mercury - see above) and 24th August. In conjunction with Jupiter 18th August

MARS : Remains in Virgo, lies close to Spica during July, and on the 13th passed just 1.3 degrees to the star. Mars brightness falls from magnitude 0.0 to +0.4 as its apparent diameter shrinks from 9.5 to 7.9 arc seconds. Less of the features are now readily observable, with only Syrtis Major being obvious. To the south of the Moon on 3rd August and 1st September. In conjunction with Saturn and the crescent Moon on 31st August, shortly after sunset.

JUPITER : Reaches conjunction on 24th July, and passes behind the Sun, then moves into the morning skies. In conjunction with Venus 18th August. Moon to the north on 23rd August and 20th September

SATURN : In Libra near the double star Alpha Librae, reducing in magnitude from +0.4 to +0.5. Halts its retrograde motion westwards across the sky on 21st July, and goes back to eastward motion. Sets around 3.00hrs by the end of July. The rings are still open at around 21 degrees, so still a spectacular sight. But as previously reported, the planet is not going to be well-placed for northern hemisphere viewing for the next few years. Moon to the south on 4th and 31st August; the latter date also with Mars. (see also MARS)

URANUS : Moon to the north on 18th July, 14th August and 11th September

NEPTUNE : Moon to the north on 15th July, 12th August and 8th September. At opposition 29th August

METEORS

The Perseids peak on 12th/13th August, but unfortunately there is also a bright gibbous Moon, which will wash out all but the brightest.

COMETS

Comet C/20112 K1, Pan STARRS is passing through Leo in July, still at around magnitude around +8. It reaches perihelion, closest point to the Sun on 27th August, but is approaching the horizon making it more and more difficult to view.

THE MOON



New 27th
New 26th
New 25th

First 5th July
First 4th August
First 2nd September

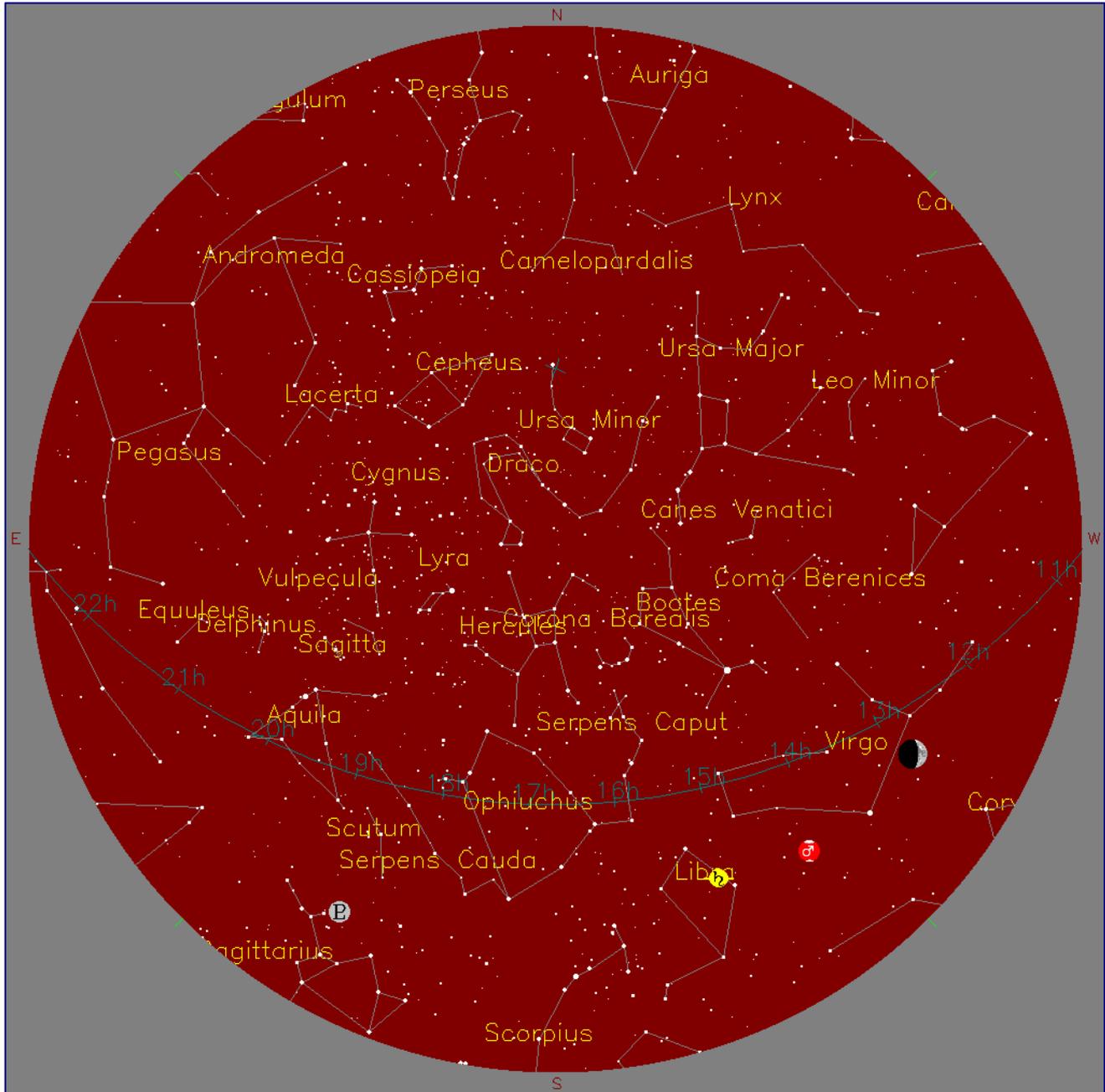
Full 12th
Full 10th
Full 9th

Last 19th
Last 17th
Last 16th

New 26th
New 25th
New 24th

THE NIGHT SKY : MAP

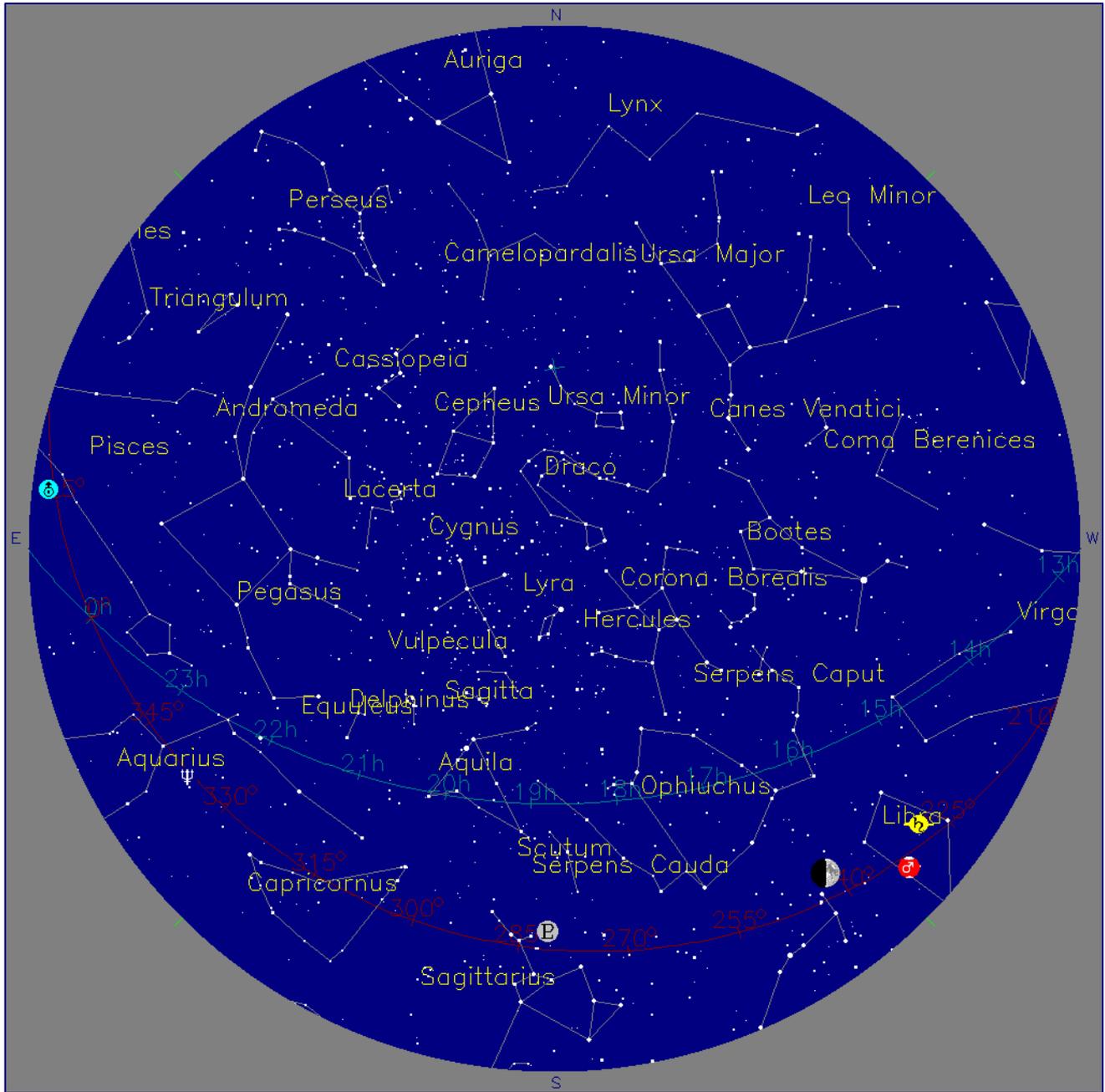
1st August 2014 : 21.00hrs BST / 20.00hrs GMT/ UTC



KEY	
 MERCURY	 SATURN
 VENUS	 URANUS
 MARS	 NEPTUNE
 JUPITER	 PLUTO

THE NIGHT SKY : MAP

1st September 2014 : 21.00hrs BST / 20.000hrs GMT/ UTC



KEY	
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Astronomical Society of Haringey

Patron: **Sir Arthur C. Clarke, C.B.E., B.Sc., F.R.A.S., F.B.I.S.**
President : Frederick W. Clarke, F.Ph.S.(Eng), F.B.I.S.
Vice President : Walter T. Baker

ASH COMMITTEE MEMBERS : 2014 – 2015

CHAIRMAN : Jim Webb

020.8441.7421 email <chairman@ashastro.co.uk> [www.glservices.org]

SECRETARY: Charles Towler

01707.322686 email <secretary@ashastro.co.uk>

(**TREASURER** : Gordon Harding)

MEMBERSHIP SECRETARY: Alister Innes 020.8803.2063 email <memsec@ashastro.co.uk>

EDITOR, P.R.O. and VICE-CHAIRMAN (and current WEBMASTER) : Mat Irvine

01908.510191 email <editor@ashastro.co.uk> [www.smallspace.demon.co.uk]

GENERAL MEMBER : Mitchell Sandler 020.8958.4185

GENERAL MEMBER : Liz Partridge

GENERAL MEMBER : Nicholas Lucas

GENERAL MEMBER AT LARGE : Gary Marriott

Contact addresses :

Chairman and general enquiries : 136, Lancaster Road, East Barnet, Herts EN4 8AL

Secretary : 6 Parkway Close, Welwyn Garden City, Herts AL8 6HJ

Membership Secretary : 154 Wigston Close, Edmonton, London, N18 1XG.

Editor and PRO : The Forge Cottage, 20 Gold Street, Hanslope, Bucks MK19 7LU

NEXT MEETING

THURSDAY 17th September 2014

WEBSITE - www.ashastro.co.uk

general email enquiries to <info@ashastro.co.uk>