2002

NEXT MEETING

THURSDAY, 15th June 2017

THE ASTRONOMICAL SOCIETY OF HARINGEY
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SOCIETY NEWS

MEETING VENUE
Music and Drama 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.
Doors open - 7.30pm : Main speaker - 8.00pm : Finish - 10.00pm sharp!

For more on this, and general meeting information, also check the website page: www.ashastro.co.uk. Last minute changes will be on the Facebook page

Find us on Facebook

OBSERVING EVENINGS

Regarding any changes to Observing Evening meetings, this is a continuing message to let Observing Officers : Jim Webb, Alister Innes or Kyri Voskou know your mobile phone number. Last minute changes will be notified via text messaging. The Facebook page will also be used, but we realise not all have (or want!) Facebook access, so it will be secondary to texting. And if you do not have a computer or cell phone, you can be phoned on your landline.

2017

June 15th: George Emsden "SETI@Home"

July & August : no meetings these months
September 21st: TBA - *BUT* this will be rather close to the October date, so this *may* move to the week before or become an Observing Evening
October 5th : AGM & Space Week
November 16th : TBA
December : no meeting this month

2018

January 18th : Dr Simon Drake & Dr Andrew Beard : The Skye Meteorite

COVER

The Howard E. Tatel 85 feet / 26 meter radio telescope at the National Radio Astronomy Observatory at Green Bank, West Virginia. It was using this telescope that Frank Drake began Project Ozma in 1960 to 'search for extraterrestrial intelligence'. More on how this all developed - and how you could be a part - at the next meeting

Photo : Mat Irvine

SOCIETY NEWS

For up-to-date information, we are using that 'necessary evil' - Facebook. Go to : www.facebook.com/groups/ASHastro/
However although originally you could view 'Public' Facebook pages (which ASHastro is), and read posts, without being a member, it now seems you have to be a member of FB to even read them. So, sorry, you'll have to join - *BUT* this does not mean you need to give away information you don't want to give. Although Facebook doesn't go out of its way to tell you, any individual's home page can be blank (as your Editor's is) it does not have to have any information. Even your birth date need not be correct.
However, once a member, if you want to 'interact' - ie post messages – on the ASH Group you will need to ask to join, and you will get 'signed up' by your Chairman or Editor. The more the merrier!

MEETING ROOM

We currently meet at Ashmole School, Cecil Road, Southgate N14 5RJ, on the first floor of the Music and Drama Block. This is the two-storey building, (left) with the entrance marked with the red arrow. We hope the first floor will be suitable for all, as there isn't a convenient lift. If anyone feels they will have difficulty, please let the Chairman know. Contact details on the back page.

For historical reference the X in the photo was our original meeting room, the original Music Studio. This is now demolished, and the site now has a new building.

MEETING REVIEW
15th June : George Emsden : SETI @ Home

Ever since we have looked up at the stars, some of us have wondered if anyone 'up there' is doing the same thing 'down' to us? Over the years this has led to stories of witchcraft, the supernatural, UFOs and other speculations, but since the advent of radio telescopes and cheap computing, this search to answer the question "Are we alone?" can be done systematically.

It stated with Project OZMA in 1960 and CETI – *Communication with* Extra Terrestrial Intelligence. This purely searched one frequency near the 21 cm 'hydrogen line'. Radio telescopes now search over one million frequencies and the definition moved to SETI – *Search for* - though the pronunciation remained. Modern data is currently analysed by an active 350,636 volunteers on 891,362 computers, where the analysing capacity has

expanded by one trillion times in 18 years. But still no *Little Green Men* rather *The Great Silence* as described by the Fermi Paradox. One scientist has described SETI@Home as rather like, "*Looking for life in the oceans - one thimble-full at a time*". There are regular rogue signals from likely suspects such as military radar and high flying aircraft, but also includes the more mundane domestic situation of people opening microwave oven doors early!

Former ASH member George Emsden will give his take on SETI@Home and the workings of BOINC, the project which coordinates this distributed computing project. Initially only extra-terrestrial data was analysed, but now many other projects closer to home, are available. And there have been some fundamental developments in SETI since George was last at ASH back in the 1980s.

The recent BBC 2 Horizon programme Strange Signals from Outer Space, (mentioned by your Editor recently on the Society's Facebook page), ought to be of interest, not least because it features Frank Drake (*below*) of The Drake Equation fame, (*also below*), which is at the heart of George's talk.

MEETING REVIEW
May 18th : Jim Webb & Alister Innes :
"Telescope Masterclass"

It was not a very well attended meeting, possibly because, among other things, it was tipping down with rain, but the few that did turn out were in for some in-depth looks at telescopes. There was the 8" Schmidt-Cassegrain, my 4" Bresser refractor and Peter Christou brought in a 3" telescope, which he had recently bought.

We first did a run down of the history of telescopes from refractors to reflectors. This led on to setting up the 3" scope which was actually a terrestrial variety (more for bird watching) but the spotter scope on the side was useful for finding astronomical objects. Its slightly rickety alt-azimuth tripod required gentle handling, but setting up the finder was particularly fruitful and relatively easy – considering we only had distant street lights as test stars. We then moved onto the 4" scope which has a polar mount and a remarkably solid tripod. This was useful to show how to set the mount level, point it to the pole star and, again, set up the spotter scope. Once the Pole Star is set, one has to manually turn only one axis to track an object. Finally we looked at the 8" which, again, has a alt-azimuth mount, slight more solid. Despite being alt-azimuth, the tracking is done by an internal computer which needs to be set up by initially lining up two stars

that are reasonably far apart in the sky. Once the alignment is done, the scope automatically tracks whatever you aim at.

Among other things discussed were the pros and cons of refractors and reflectors and how to determine the magnification of the set-up.

Jim

Photos from the last meeting, by Dave Starling

SPACE NEWS - compiled by Kyri Voskou

PHOTO-OP WAS WORTH A YEAR-LONG WAIT!

An Australian amateur photographer has shown the pros how it's done after waiting a year for the perfect photo-op. Dylan O'Donnell had just a third of a second to snap the International Space Station as it flew in front of the Moon, and got the perfect photo.

Having prepared his Celestron telescope and set his camera to burst mode, he then sat tight and waited for his moment. He had learned of the flyby using an astronomical calendar and planned his shot a full year in advance. He said there was nothing complicated about taking the photo though, revealing "*If you think that it might be a case of sitting there with your camera and a clock, with one hand on the shutter release, you'd be absolutely correct!*"

O'Donnell's image clearly shows the ISS toward the top right hand side of the above image, and in greater detail in the close-up below

CARL SAGAN'S SPACE FLASHES SOLVED

It's been around a quarter of a century since Carl Sagan spotted unexpected flashes of light on images taken by the Galileo spacecraft. This was while the Jupiter probe had its cameras pointed back towards the Earth, and Sagan and his team saw that the flashes seemed to appear over the oceans, so surmised that they were caused by sunlight reflecting off very flat patches of water.

The flashes returned recently, appearing in images taken by a weather satellite that was launched less than two years ago. This time the flashes also appeared over land, so NASA has had to go back to the drawing board to work out what was causing them. After analysis it appeared that the nearly 900 flashes on the Deep Space Climate Observatory (DSCOVR) images were occurring around cirrus clouds – the cloud types normally found highest in the atmosphere. Cirrus clouds are made of ice crystals – so the cause of these mysterious glints suddenly appears rather more obvious – sunlight reflecting off chunks of ice suspended high in the atmosphere.

It's the only realistic explanation that can be drawn according to the Goddard Space Flight Center, that confirmed that the flashes are definitely not coming from ground level.

One of the mysterious glints is shown in the red circle

ISS IMAGES HIGHLIGHT OVERUSE OF LIGHTING

Astronaut Thomas Pesquet has a couple of claims to fame. Firstly, the Frenchman has just finished one of the longest stints a European has ever made on the International Space Station. Secondly, the images he took from orbit have been a massive success. These weren't part of his mission – more just a case of doing what he enjoyed during his hours of relaxation.

There have been some sensational photos from all around the world but his images of Europe at night have been particularly good. One of them highlights what he calls a "European Triangle" of lights. London and Paris make up two corners whilst the entirety of Belgium completes the triangle.

It was impossible to pick another individual city because Belgium is so very bright. This is due to the fact that every inch of the country's comprehensive motorway network is lit throughout the night.

The Belgians won't thank Pesquet for bringing their overuse of lights to attention, but would point out that their population insists on having a fully lit motorway system.
There are so many lights used on their motorways that even from space Belgium is lit up with the much yellower hue produced by this lighting.

QUESTION TIME...

If you correctly insert answers to these questions in the spaces below, the boxes reading downwards will reveal the possible end of a star.

1 1978-81 television science fiction drama
2 Chemical element 'U'
3 An orbit's closest approach to Earth
4 Short wavelength radiation
5 One of Sir Clive's computers
6 God of the Sea
7 British female astronomer
8 Brand of bullet-proof material
9 Section of a rocket

1. _ _ _ _ _□ _
2. _ _ _ _ _□_
3. □_ _ _ _ _ _
4. _ _ _ _ _ _□_
5. _ _ _ _ _□_ _
6. _ _ _ _ _ _ _□
7. _ _ _ _ _ _ _ _□_ _ _ _
8. _ _□_ _ _
9. _ _□_ _

Answers next month

Last month's answers:
LOCAL GROUP,
PRISM,
SOLSTICE,
ELEMENT,
ANNULAR,
VOSTOK,
CALCIUM,
EDWIN HUBBLE,
PERTURBATIONS.

CHAIRMAN'S QUARTERS

Revolutions come and go. Apart from political ones, the Industrial Revolution was probably one of the most radical in recent times, in terms of helping mankind in physical ways. Computing technology is the most recent one that has influenced the way we use machines, our thought processes and behaviour. Machine learning and artificial intelligence are possibly the most researched aspects of this technology right now. The general consensus is a division of opinion between those who think it's going to revolutionise our lives and those who think it's going to kill us all; but there's a third option: what if it's just going to be just downright annoying?

What are the possibilities that arise from pairing connected devices (the 'Internet of All Things'), predictive analytics and artificial intelligence. Do we get woken up in the morning by a smart device's digital assistant? How about: "*Last night, you had an irregular heartbeat,*" it said, "*and as a result of that, I've got you up an hour early today. I have loaded all of your bio-data onto the cloud, I've analysed all similar DNA and all of your family type, and that will be at your doctor's by the time you arrive this morning. I've rescheduled all of your morning's appointments, and I've readjusted your Starbucks order to a Starbucks on the way - and since you're going to a heart doctor, I've made it all decaf. Oh, and I've re-stocked you with a year's supply of vitamin C and extra healthy yoghurt for this week.*" What??? Yeah - thanks, but no thanks.

Does that sound like the most creepily invasive thing in the world? OK, it's just a random example, but the idea of a piece of software taking it upon itself to reschedule one's entire day is incredibly presumptuous. What if one had an important meeting that can't be rescheduled? Or a client that's flying in specially? Well done Alexa (or whatever smart-ass piece of 'helpful' software some high tech company is trying to push as the next best thing since sliced bread), you just blew a major deal! OK, so we are looking at some high power businessman's lifestyle as an extreme example but with down to earth people, the same can apply.

It is a nightmare scenario of permissions, personal data and sensitive information, too. How, for example, did Nanny Bot get one's entire family medical data? Presumably anyone that doesn't want their health information uploaded to the cloud any time an electronic busybody decides they're looking a bit peaky is just going to have to lump it. That's without even mentioning the potential for technology like this to screw up one's entire day based on a false positive. Many digital heart monitors have been accused of being off by as much as 20 BPM! And for those who drink a lot of coffee, changing their coffee order to a decaf, could be too much of a virtual nag. "*I'm an adult, and I'll drink as much caffeine as I damn well choose! So there!*"

This might be coming across as overly harsh or critical, and it might seem like I'm just being a bit of a Luddite with these examples. However, the point is that this is indicative of one of Silicon Valley's biggest problems: just because you're excited about a technology's potential doesn't mean it hasn't got unexpected downsides or unforeseen consequences. If a sleep tracking tool decides one has not got their eight hours, should it be able to cancel the alarm for an 8am meeting? Even more extreme, if the Amazon Echo was to overhear one plotting a murder, should Amazon be obliged to report it? Social networks have exponentially amplified people's ability to speak out and share views freely, but what does one do when those people try to promote extreme and life threatening views? These are questions that technology throws up, and they deserve consideration before ones' product is out in the wild - because once it is, it's too late.

See you at the meeting…

JIM

THE NIGHT SKY : THE PLANETS : June – July 2017

MERCURY : still lost in the glare of the Sun for the early part of the month. Reaches superior conjunction on June 21st and moves back into the evening skies. Could then be spotted very low in the west after sunset by the end of June and into July.

VENUS : visible in the east before dawn during June. Reached its greatest elongation (46 degrees west of the Sun) on the 3rd of June. Magnitude reduces slightly during June from -4.5 to -4.2 as the angular diameter shrinks from 24 to 18 arc seconds. However, at the same time, its illuminated phase increases from 48% to 62% which explains why the magnitude only drops slightly. Even though it will be moving back towards the Sun, as the angle of the ecliptic to the horizon increases at this time of the year, it elevation before sunrise will continue to increase until August.

EARTH : Summer solstice - June 21st.

MARS : Could still be just about visible, but rapidly closing in on sunset and more and more difficult to observe. Reaches conjunction on 27th July and then passes behind the Sun, where it will be lost from sight over most of the summer months.

JUPITER : still dominating the evening sky shining in the south / southwest after nightfall. Currently setting at about 03.00hrs (BST) at the start of June, and 01.00hrs as we move into July. Magnitude falls from -2.3 to -2.0 and the angular size falls from 41 to 37 arc seconds. It lies in Virgo some 11 degrees to the west of Spica, Alpha Virginis. The planet halts its westwards, retrograde, motion on the 11th June and begins and eastwards journey back towards Spica. It will pass Spica on September 11th. For 2018 it will only reach an elevation of some 25 degrees when south and during 2019 - 2020 just 18 degrees. Moon close on 30th June.

SATURN : at opposition on June 11th and will be at its highest elevation due south at around 01.00hrs (BST) and visible throughout the night. At magnitude -0.1 all month with an angular size of 18.3 arc seconds. The rings are about as open as they ever are, as seen from Earth, at 26.5 degrees. Unfortunately that Saturn, located in the southern part of Ophiuchus between Sagittarius and Scorpius, only reaches an elevation of 17 degrees above the horizon when due south, which means viewing requires a clear horizon

URANUS : Still in the morning skies and close to Venus. Consequently the far brighter planet could act as a pointer – assuming you can see Venus anyway due to its low position. Uranus is still at magnitude +5.9, so *just* on the theoretical edge of naked-eye visibility.

NEPTUNE : Potentially visible in the morning skies in Aquarius at magnitude +7.9.

METEORS

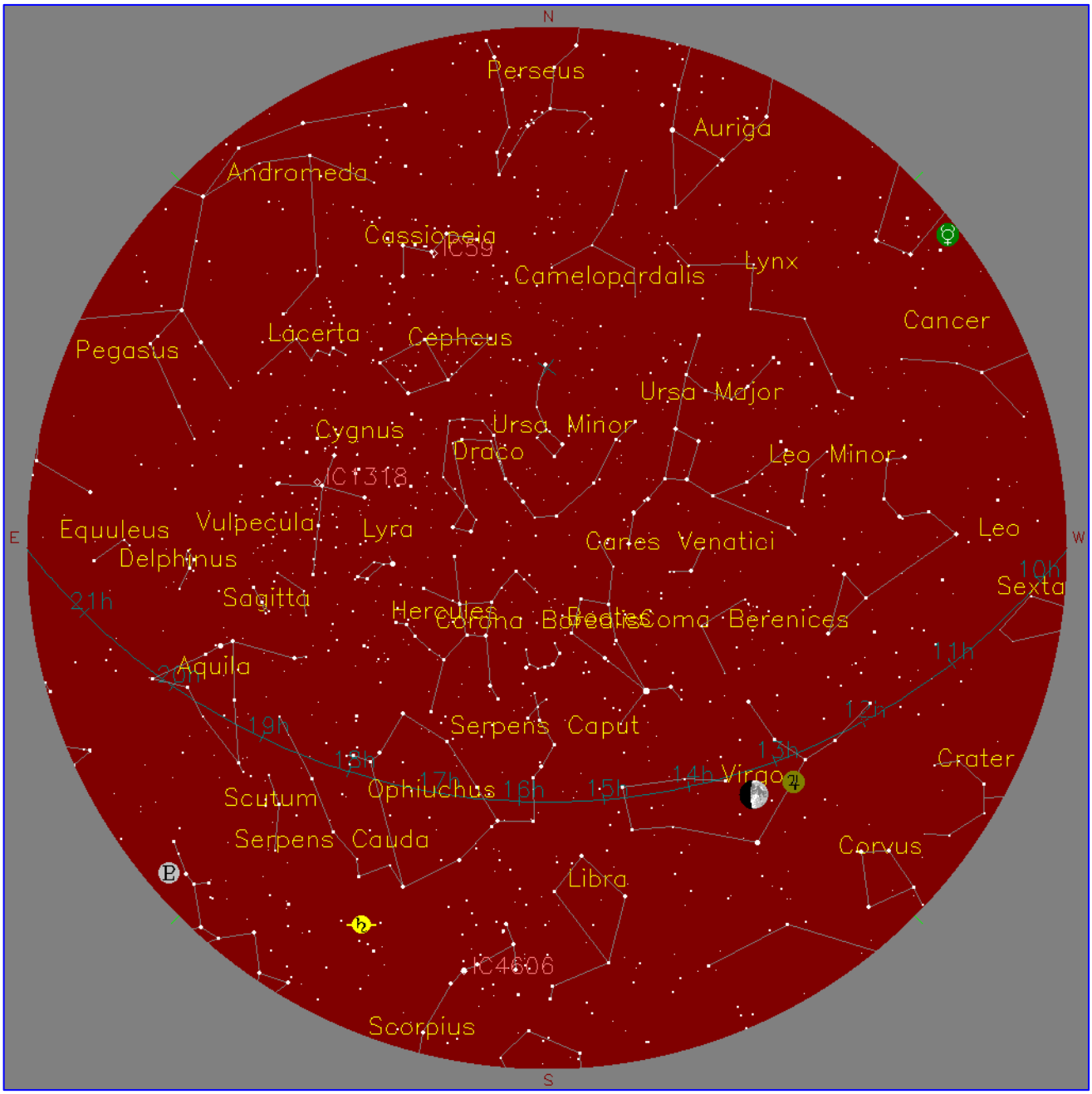
Lyrids peak over 15th – 16th June

THE MOON

New 25th May	First 1st June	Full 9th	Last 17th	New 24th
New 24th	First 1st July	Full 9th	Last 23rd	New 25th

THE NIGHT SKY : MAP

1st July 2017, 21.00hrs UTC-GMT / 22.00hrs BST



KEY	
MERCURY	SATURN
VENUS	URANUS
MARS	NEPTUNE
JUPITER	PLUTO

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