

# 2002



**NEXT MEETING**  
**THURSDAY, 19<sup>th</sup> November 2015**  
**THE ASTRONOMICAL SOCIETY OF HARINGEY**  
**VOLUME 44 : ISSUE 1 : November 2015**  
[www.ashastro.co.uk](http://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.

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

For more on this, and general meeting information, also check the website:  
[www.ashastro.co.uk](http://www.ashastro.co.uk). Latest update: September 2015.



## 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.

And, if not already on the list, your email address - emailed to [observing@ashastro.co.uk](mailto:observing@ashastro.co.uk) - reaches all three. The Facebook page will now also be used.

### 2015

**November 19<sup>th</sup> : Mat Irvine : “Robert vs The Flying Saucers”  
: There’s a small town in New Mexico (begins with ‘R’) which has an odd association with two very diverse connections with ‘space’...**

December : No meeting this month

### 2016

*January 21<sup>st</sup> : TBA*

*February 18<sup>th</sup> : TBA*

*March 17<sup>th</sup> : Mike Goldsmith : “New Horizons to Pluto”*

#### **COVER**

Standing outside of the Roswell Museum and Arts Center in New Mexico, is this bronze figure of Robert H. Goddard complete with his firing controls. He had come to the area in the 1930s to continue his rocket experiments, which had had started in Massachusetts with the world’s first launch of a liquid-fuelled rocket in April 1926.

But something else supposedly happened in the Roswell area, in July 1947 - that is celebrated in Roswell’s ‘other museum’ at the other end of the high street - the one emblazoned in large letters - ‘UFO’.

In this month’s talk, your Editor explores if there is any connection?

*Photo - Mat*

## SOCIETY NEWS



For up-to-date information, we are now using that 'necessary evil' - Facebook. Note as this is an Open Group you do not have to be a member of Facebook to read posts and messages, you just need some form of Internet access.

Go to : [www.facebook.com/groups/ASHastro/](http://www.facebook.com/groups/ASHastro/)  
However if you want to 'interact' (ie post messages), you have firstly to join Facebook, then, on the ASH Facebook page, ask to join our Group, and you will get 'signed up'.  
The more the merrier!

## MEETING ROOM



We currently meet on the first floor of the Main Music Block at the School. 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, and the site has been redeveloped with a new structure). 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

**16<sup>th</sup> November 2015 : Mat Irvine : "Robert vs The Flying Saucers"**

At one end of a small New municipal museum and a display allocated to an south, from 1930s. He was launching world's first powered by



Mexican town stands its arts centre. Part of that is engineer who travelled Massachusetts, in the rockets - including the liquid fuel - and needed to



exploit the wide open spaces. His name was Robert Hutchings Goddard.

At the other end of the town is a converted cinema - converted to house what is supposedly known about an event that also hit the area, about a decade after Goddard finished his experimental launches - the so-called 'Roswell Incident', for the town is indeed that. Was there a connection?

Mat Irvine (*left*) at the Goddard site takes you through the options.... Did it involve those on the right?



## MEETING REVIEW

### 8<sup>th</sup> October : Michael Morris Franks, LLB, FBIS "Who Owns the Moon"



Yet another well attended meeting enjoyed Michael Franks' presentation.

Michael covered the fascinating history of space ownership along with information on the various individuals who are laying claim to 'what's up there'. If you thought that nobody has tried to register ownership of our satellite then think again – there

have enough ploys and shenanigans to make a very entertaining story.

We also caught up with the latest images of Pluto and Michael's new theory on what's causing the minor planet to develop its own huge mountain ranges. When NASA finally works it out we'll be able to tell them that, "Our man got there first"!



*Kyri Voskou*

*Photos : Alister Innes*

## AGM REPORT

The AGM was kept to a bare minimum to give Michael Franks as much time as possible for his talk. The main part of the AGM is the election of the following year's Committee. The net result of the elections is that there has been no change in the structure of the Committee. Normal service has been resumed but, as always, Members of the Committee are always open to suggestions from the membership in general. Don't be shy - we don't bite.

*CHAIRMAN Jim Webb*

## OBITUARY : JACK SHARP

This has already been reported on the Facebook page, but sadly we lost one of the Society's founder members on 9<sup>th</sup> October. Jack Sharp was a member from the very beginning, way back in 1971, and regularly attended meetings,



along with his son Kevin. (*right in photo*) In later years Jack could only attend if Kevin bought him along, but this occurred at regular intervals.

Sincere condolences to Kevin and other members of the family.

# CHAIRMAN'S QUARTERS



On the Tube, the other day, I sat mesmerised at the number of people feeding their smartphones with almost affectionate thumb and hand gestures! It gave me a momentary flashback to the days of Tamgotchi – those strange Japanese 'mechanimals' that you had to feed and pander to regularly otherwise they (thankfully?) die on you. I was always under the impression that machines were there to serve us and not demand continuous attention from us to the point of making us subservient to them. Is it already the other way around? Will we have to see to machines' every need?

The notion has always been that machines are just here to help me become a better me and the machine become a better machine - until the machine becomes a better me. This is the implication of 'smart' technology – machines that will 'understand' me and do everything for me so that I can do... well, what? Sit around watching 'smart TV'? Spend my time in abject leisure wondering which breakfast cereal to have? Who is going to pay for me if machines eventually do my work for me? Are we becoming a lazy mech-dependent species that would go into a flat spin if the machines failed? Futurist Ray Kurzweil is telling the press that in a mere 15 years, machines will be smarter than people. This is the type of person who would get a job at a University, while the rest of us become machine cleaners and screw polishers! A chief data scientist, John Foreman, has written: "In the hands of machine learning models, we become nothing more than a ball of probabilistic mechanisms to be manipulated with carefully designed inputs that lead to anticipated outputs." Yes, we become, as he puts it, "Nothing but products of previous measured actions." Even further, Russia Today reports, that the aim of the machinists is to, "Know you better than your intimate partner." With the likes of Google and Facebook, we are not far off this.

As an example of this process, until the early 1980's, designers could lay out integrated circuits and microcomputers on a draughting board. With the advent of the PC and more powerful computing, these designers started using computer programs to help them design more complex micro-chips. Today, the concept of a person, or even a team, designing a microcomputer is virtually unthinkable! Modern microprocessors are so mind-bendingly complex that even the designers don't really know what is in them, as long as they do the job 'right'. The design process has been handed over to the machines to do. Admittedly, the programs that drive these machines have been human designed and created, but the algorithms are now so complex that we have to trust machines to check them and hope that the answers they give us are correct or even valid. The possibility exists of a section of the program doing things that were not part of its design but happen anyway because of a random set of circumstances arising which no-one had predicted or accounted for.

So we now have tiny 'elite few' who vaguely understand the technology but evangelise about our relationship with machines. The word 'better' often creeps up and is always enlightening. Machine proponents always believe that they are creating something 'better'. With a sleight of word that a machine couldn't grasp, they insist that their 'better' is 'better' than what you currently regard as your most intimate experience. And that is because they, purportedly, know 'better'. However, it is often a case of 'data-laundersed discrimination'. What was, "I think, therefore I am" seems to have become, "I was, therefore I must be the linear same." In essence, then, we come down the level of machines, rather than machines rising to become somehow smarter than us. Our past with machines hasn't exactly been perfect. There is this neat, charming belief that machine power will always rise above that of the human. But how many times in the past and present have you had to reboot a machine, slap it, poke it, knock it, or shake it? How many times did it not start, not show you what you wanted to see, take an age before it delivered what it promised, or simply lie there half-witted and give you a blank face? Micros are fast - but stupid. Never forget human power!

*See you at the next meeting*

*JIM*

## Should we be nuking Mars?

That's the surprise suggestion by Elon Musk, better known for his work with Tesla and SpaceX.

It isn't the first time the suggestion has been made but it's the most high profile mention to date of the proposal, aimed at melting the planet's ice caps. This would release both water and carbon dioxide. Water would be vital for longer term missions whilst carbon dioxide would help start a greenhouse effect and raise surface temperatures around the entire planet.



There's little doubt that manned missions to Mars will be undertaken and anything that can make such a project realistic will be under the microscope, but there are plenty of reasons why the idea might never get a firm foothold.

Contaminating the Martian atmosphere with nuclear material would not be a popular way to endear a doubting public and a greenhouse effect could take thousands of years - if not longer.

Mars is also far less able to prevent its atmosphere from being stripped away by solar forces. Even though it's further from the sun than our own Earth, Mars' lower gravity and lack of a molten iron core and the magnetic field it creates means that the atmosphere is very thin, and getting thinner.

The idea of hurling nuclear bombs at Mars might have a sound basis but in reality we simply don't know if the idea would work quickly enough, well enough or for long enough.

## Space's first woman still has a story to tell

Fifty-two years after becoming the first woman in space, Valentina Tereshkova reflected on her historic trip and how she very nearly never returned. When the Soviet Union launched Vostok 6 in 1963, cosmonaut Tereshkova exclaimed, "Hey sky, take off your hat, I'm on my way!" But it wasn't long before she realized something was wrong. For one, she had forgotten her toothbrush. "I had toothpaste, and water, and my hands."



She had more pressing concerns to deal with, though. "My toothbrush was nothing compared to the fact that the space craft was programmed to ascend, but not to descend," she says. "Now that was a mistake."

Fortunately for Tereshkova -who would have otherwise spent eternity traveling through space - her team on the ground was able to install a new computer program. She orbited Earth 48 times before safely returning three days later. In return for the faulty engineer not being punished, Tereshkova didn't tell anyone about what happened for 30 years. But she didn't keep quiet about everything, making her displeasure known when the Soviet Union refused to send any more female cosmonauts into space because it was, "Too dangerous."

"On Earth, men and women are taking the same risks," she said. "Why shouldn't we be taking the same risks in space?" Tereshkova was speaking to media during opening celebrations for a new exhibition at the Science Museum in London.

### **Enceladus ocean 'must be global'**

Scientists have determined that the sub-surface body of water on the Saturnian moon Enceladus must be far more extensive than first thought.

Using pictures from the Cassini probe, the researchers have detected and tracked a slight wobble in the moon. After seven years of study they have concluded this flutter would be much less if the icy crust was connected directly to Enceladus's rock core.

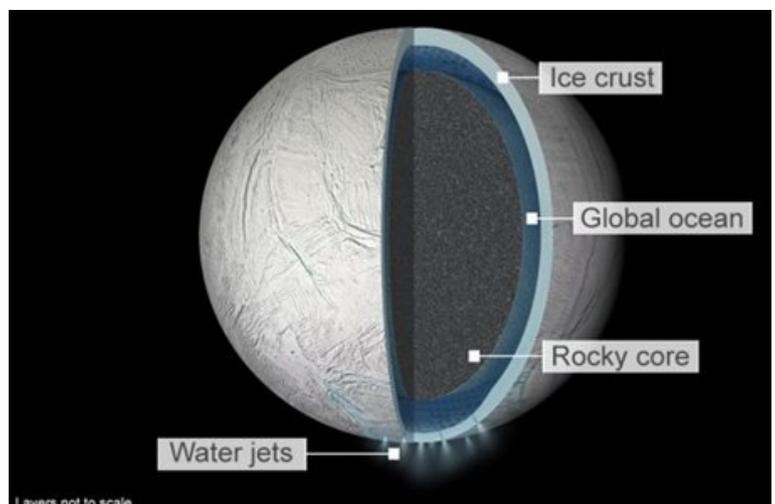
It is strong support for the idea of an intervening, global mass of liquid.

"If the surface and core were rigidly connected, the core would provide so much dead weight that the wobble would be far smaller than we observe it to be," said Matthew Tiscareno, a Cassini scientist based at the Seti Institute but previously affiliated to Cornell University, "This proves that there must be a global layer of liquid separating the surface from the core."

The first clue that something interesting was going on was some low-resolution images showing a plume coming off the south pole that had the space-interested internet all abuzz.

Shortly after, Cassini detected a disturbance in magnetic fields produced by the presence of what appeared to be an atmosphere. Scientists then established that the moon was actually venting huge jets of water vapour through south polar surface cracks dubbed tiger stripes because of their resemblance to the big cat's fur coat.

But there has always been a debate about how large the hidden reservoir might be. Early



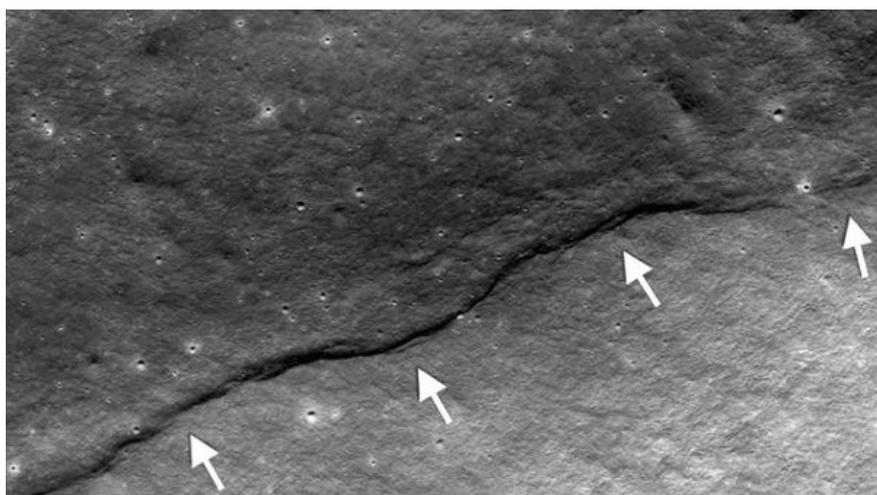
thinking suggested it might only be a relatively small lens of water. This new result, published in the journal *Icarus*, is the best evidence yet that the sub-surface sea is not regional in nature, but encircles the entire globe. It is significant because it makes it more possible that Enceladus is a habitable world, particularly when considering that Cassini has also detected salts and organic molecules in the jets.

### **Moon's surface still changing - thanks to the Earth**

Earth's gravity is making patterns in the thousands of small cliffs that wrinkle the shrinking surface of the Moon, according to a new report in *Geology*. Scientists determined the Moon was shrinking—its surface has moved about 300 feet closer to its core over 4 billion years.

The study focuses on approximately 84 small cliffs, called lobate scarps, discovered on its surface. The scarps, which are less than 6.2 miles long and 300 feet high, are formed when the moon's cooling interior causes the Moon to contract and its crust to buckle, explains a NASA post at *Science Daily*. But if that's all that was happening, the appearance of the scarps should be random.

"This is not what we found", said Thomas Watters of the National Air and Space Museum in Washington. "There is a pattern in the orientations of the faults and it suggests something else is influencing their formation, something that's also acting on a global scale—massaging and realigning them."



In the five years since 2010, NASA's Lunar Reconnaissance Orbiter (left) has discovered more than 3,000 more Lunar cliffs, and an analysis of them confirms scientists' suspicions that Earth's gravitational tidal forces are affecting them, says NASA.

# SKY VIEWS

There are some great images of the 29<sup>th</sup> September Total Lunar Eclipse on the Facebook page by Richard Bailey. (You'll have to scroll down to find them - Facebook is not 'searchable'.) However here's your Editor's view - taken in the Chicago area that evening.

Right : the Moon rises,

Below : "Ah there it is!"



Below : sequence taken over several hours. For first two images, the Moon has only just risen behind the houses (above) - the power lines are in shot #2



## **THE NIGHT SKY : THE PLANETS : November - December 2015**

**MERCURY** : At superior conjunction on 17<sup>th</sup> November, moving back into the evening skies. At greatest elongation east 29<sup>th</sup> December.

**VENUS** : Rising around 03:30. The magnitude drops marginally from -4.4 to -4.2 during the month while the angular diameter drops from 22.7 to 17.6 arc seconds. Venus is rapidly moving closer to the Sun and will have dropped by around 30 degrees towards the horizon so will have become less prominent by the end of November. Moving from Leo into Virgo, it passes less than 0.2 degrees from Eta Virginis on the 21<sup>st</sup>. Moon to the north on 7<sup>th</sup> December

**EARTH** : Winter solstice 22<sup>nd</sup> December. A lot of Solar activity is happening at the moment. With CME (Coronal Mass Ejections) happening, this cues potential aurora activity. These have been seen in northern England, so you never know... As what used to be said, "*Keep watching the skies*".

**MARS** : Rising about 03:30hrs at magnitude +1.7, from the beginning of the month. Increases to magnitude +1.5 as the month progresses with its angular diameter increasing from 4.2 to 4.7 arc seconds. This is still too small for any details to be seen on its salmon-pink surface. Was close to both Jupiter and Venus at the beginning of November, but as the month progresses, Mars ends up around 20 degrees to the lower left of Jupiter and 14 degrees to the upper right of Venus. Moon to the south on 6<sup>th</sup> December

**JUPITER** : Very bright in the morning skies. In the last week of November, Jupiter rises 40 minutes after midnight, shining around magnitude -1.8, increases to around -2.0, reaching an elevation of 20 degrees or more. Moon to south on 4<sup>th</sup> and 31<sup>st</sup> December.

**SATURN** : Reaches opposition at the end of this month, in conjunction with the Sun on 30<sup>th</sup> November, so the last chance to glimpse the planet, already close to the horizon at Sunset, for a few weeks. Will be moving into the morning skies. Moon close on 13<sup>th</sup> November

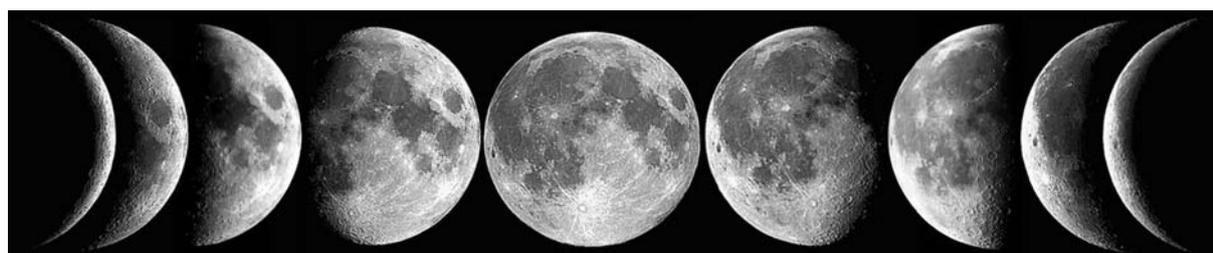
**URANUS** : At opposition on 12<sup>th</sup> October. Moon to the south 22<sup>nd</sup> November and 20<sup>th</sup> December

**NEPTUNE** : Stationary on 18<sup>th</sup> November. Moon to the north on 20<sup>th</sup> November and 17<sup>th</sup> December.

### **METEORS**

Leonids active 15<sup>th</sup> - 20<sup>th</sup> November, peak on 18<sup>th</sup> , Geminids peak on 14<sup>th</sup> December. Ursids active 17<sup>th</sup> - 25<sup>th</sup> December

### **THE MOON**



New 11<sup>th</sup> November

First 19<sup>th</sup>

Full 25<sup>th</sup>

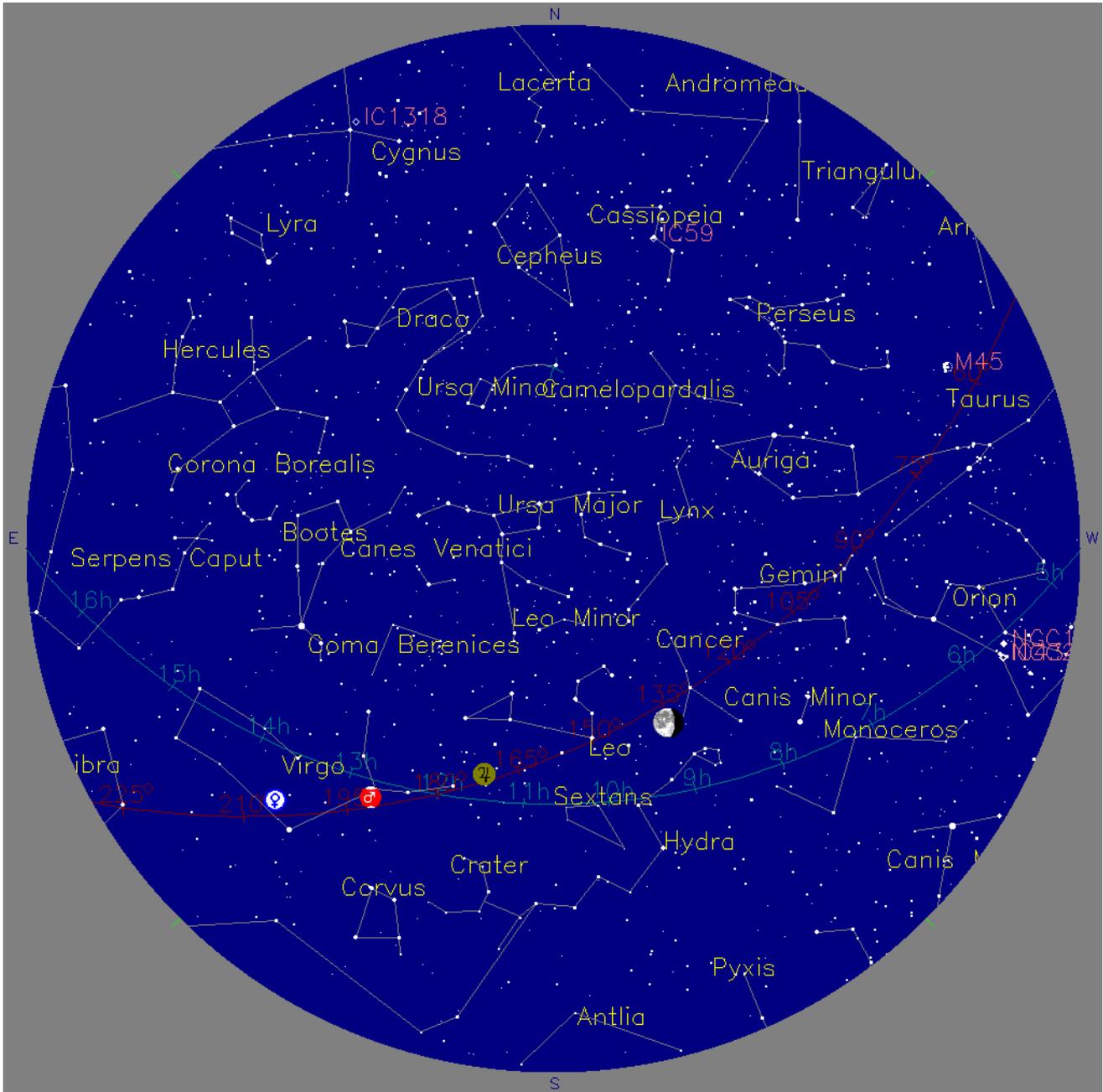
Last 3<sup>rd</sup> December

New 11<sup>th</sup>

# THE NIGHT SKY : MAP

1<sup>st</sup> December 2015 : 06.00hrs GMT- UTC

Note this is for the morning as you have three planets, plus a crescent Moon.



KEY	
 <b>MERCURY</b>	 <b>SATURN</b>
 <b>VENUS</b>	 <b>URANUS</b>
 <b>MARS</b>	 <b>NEPTUNE</b>
 <b>JUPITER</b>	 <b>PLUTO</b>



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