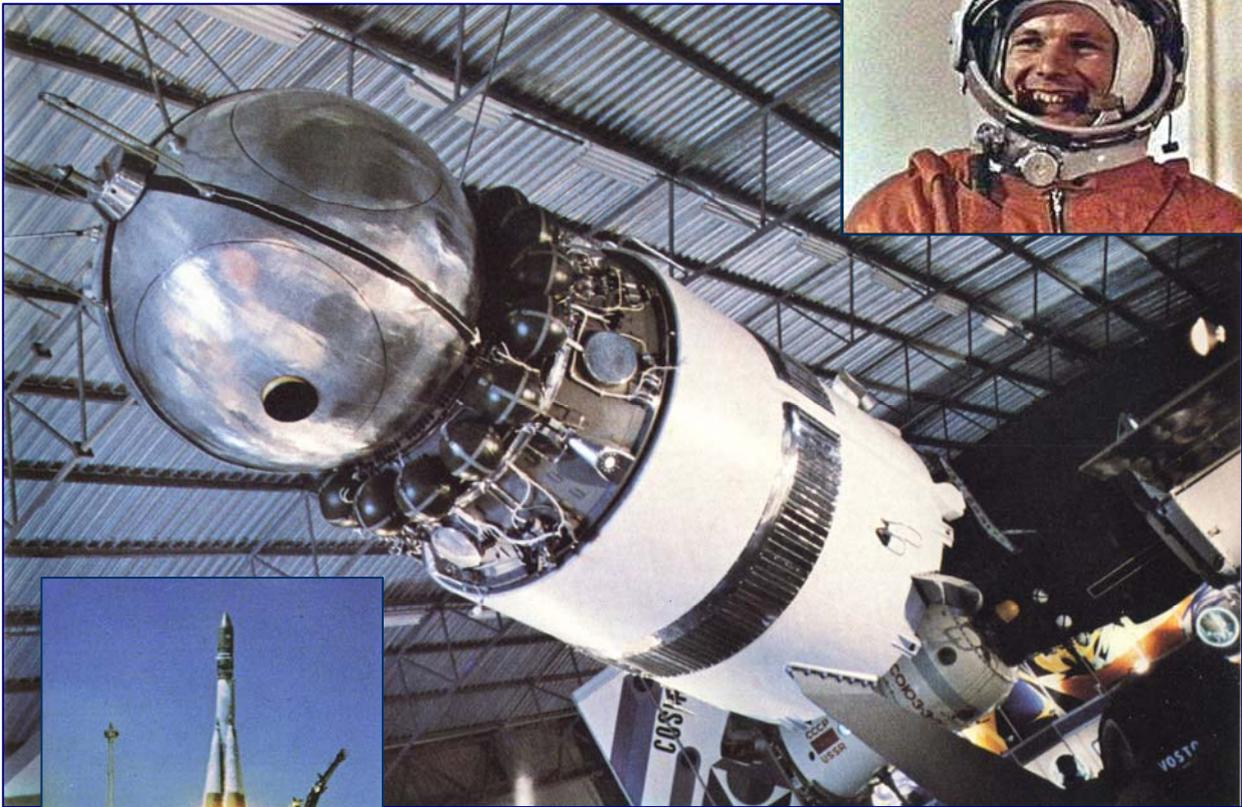


2002



NEXT MEETING
THURSDAY, 21st April 2011
THE ASTRONOMICAL SOCIETY OF HARINGEY
VOLUME 39 : ISSUE 6 : APRIL 2011

SOCIETY NEWS

MEETING VENUE :
Ashmole School, Southgate, London N14 5RJ.

The day for all meetings is usually the third Thursday of each month. The exceptions are August, when currently we do not hold a meeting, and December, when the Christmas Meet has always traditionally been held during the second week. However, in case of changes – and there have been a few over the last year or so – it is always advisable to double-check the dates below.

Doors open - 7.30pm : Main speaker - 8.00pm. Finish - 10.00pm

2011

The programme for this coming year is *still* being finalised, though we aim to have a number of our regular speakers throughout the year, and hopefully some new ones.

The dates currently scheduled are as follows, though some may have to be changed due to school holidays.

April 21st : Jerry Stone : The Next Fifty Years in Space

May 19th

June 16th

July 21st

August - Summer Break

September 15th

October 20th *AGM*

November 17th

December 8th Christmas Party and Guiz VII

The Committee is however looking at whether it is worth continuing doing the Party, either on the traditional December date, or - as happened this year - in January, (especially as that was not very well attended). Any feedback from the Society would be welcome - either by letter or phone to the Chairman, (details back page), or email to <info@ashastro.org.uk>

COVER

12th April 1961 saw the launch of the world's first Man in Space, Yuri Alexseyevich Gagarin aboard the Vostok 1 spacecraft. Launched at 6.07 UT, he reached an altitude of 203 miles / 327 km and his flight lasted 108 minutes in which time he orbited the Earth once.

The launch site at that time was announced as 'Baikonur', in the then Russian Republic of Kazakhstan, though in reality this was intended to mislead. At that time Baikonur itself was a small mining town about 200 miles northeast of the site which was actually the Tyuratam Cosmodrome, part of the town of Leninsk. However, just to add to the confusion, Leninsk was re-named 'Baiknour' in 1995!

Main photo : Mat Irvine

SOCIETY NEWS

We meet in what is now the Music Room at Ashmole School. (This was the Curriculum Support Building - and still noted as such in the map.) This is the low building, (in the centre of the photo), just past the Performing Arts Centre and opposite the main entrance to the technology block.



2002 in Electronic Form

The Committee is still continuing its ideal of getting as many onto an electronic version of 2002 as possible as a) it saves printing costs and - especially - b) saves mailing costs! If have still not done so, and would like to receive your 2002 by email, (it comes as a pdf), please email <info@ashastro.org.uk> However the Committee would also like to emphasise that this is in no way obligatory and of course if you would still prefer to receive a hard copy through the post, (whether you are on email or not), this is perfectly acceptable.

The Committee has also talked about getting a presence on Facebook for the Society, (as it seems to be the 'in thing'...), and also whether to send out text messages, where changes to meetings; speakers or frankly anything 'interesting' can be sent out. Arguably this also could be done by Twitter, but currently we feel a combination of Facebook and texting will suffice at the moment. We assume most these days will have a mobile cell phone, so could you please send the number to <info@ashastro.org.uk>. (Note, if you don't actually have a cell phone, texts can also be received by BT landlines, when they are read out.)

MEETING PREVIEW : April 21st Jerry Stone : The Next Fifty Years in Space

October 4 2007 marked the 50th anniversary of the beginning of the Space Age, which started with the launch of Sputnik 1, and we have just passed the April 12, 2011 date that marked the 50th anniversary of the first Man in Space. Predicting the future isn't easy – all kinds of people have failed to foresee achievements that are now taken for granted. But they have also predicted things that have not taken place – bases on the Moon, humans on Mars, and holidays in space. Jerry presents a personal view of what the future may hold for us, all done in his inimitable style.

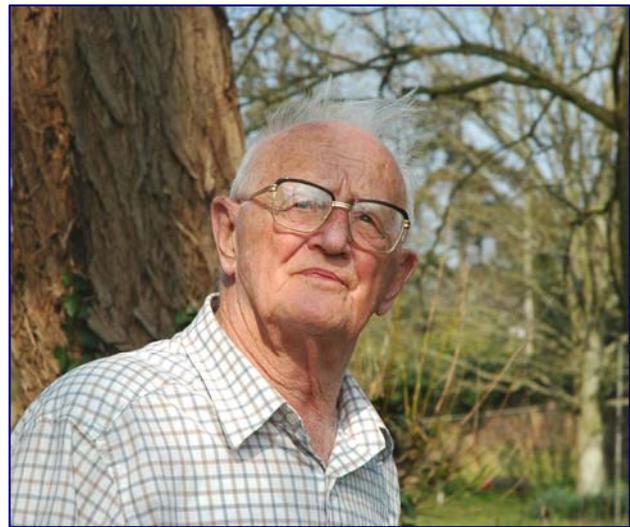
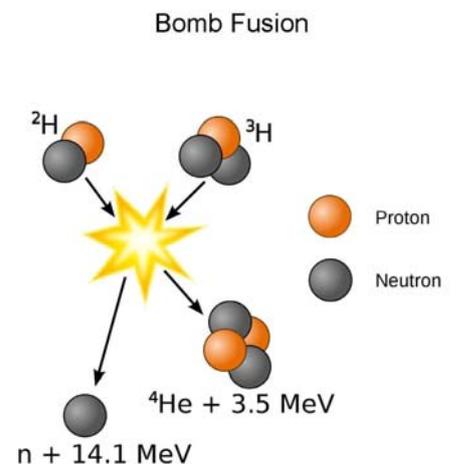


MEETING REVIEW : March 17th :
Jim Webb : Stellar Furnaces - How to Stoke the Nuclear Fires



In the talk Jim explained of basically that the Sun working as a controlled nuclear bomb, so he showed an image of the Tzar Bomba - the biggest nuke (50MT) ever exploded on Earth. (left).

What happened here is basically what happened in the Sun, in actuality quite a simple process, albeit involving immense temperatures and pressures. However possible the most intriguing fact Jim came up with towards the end was that, given the size of the core of the Sun, it generates energy per volume at the same rate as a compost heap!



Birthday greetings to two very important people associated with the Society. Firstly Sir Patrick Moore - who suggested the Society be formed in the first place way back in 1970 - was 88 on 4th March. Patrick celebrated with a party for friends and associates at his house in Selsey on the 5th. Then on 11th of this month, our founder and President, Fred Clarke, was 90 years young.

In Search of the Northern Lights

Mitchell Sandler

It all started when I saw a poster on a tube platform - *Northern Lights : short breaks with Icelandair*. Like I suspect most readers of this magazine one of my ambitions is to see the Aurora and given the recent financial collapse in Iceland, along with suggestions that solar activity was on the rise, it seemed like this was the opportunity I'd been waiting for. Ideally I'd have liked to have gone in February but I'd already booked a holiday in Tunisia, so I booked a trip in March just before the equinox. One reassuring thought was that the weather in Iceland is usually quite pleasant in March.

As it turned out there was a massive coronal ejection in February leading to the possibility of the Aurora being seen in Scotland. Unfortunately I wasn't in Scotland, I wasn't even in Tunisia as it turned out, that holiday having been cancelled (I was offered a trip to Luxor which, presciently, I turned down - but that's another story). Whilst Malta has its charms I was musing that I'd much rather have been in Reykjavik.

So March 17th found me at Heathrow carefully avoiding the man enthusiastically wishing everyone a happy St. Patrick's Day and a few hours later I was in the planet's most northerly capital city. The first thing to notice was that there seemed to be an awful lot of white stuff around - far more than Reykjavik usually gets. Unlike London this doesn't mean the entire road system seizes up - what it does mean is that whenever it gets windy, you feel it. Biting winds plus your face being blasted by high velocity snow does not make for a happy tourist. Nor does the assurance that beneath the several inches of the stuff are some of Europe's great natural wonders. Volcanic craters and National Parks are, I'm sure, very impressive when you can see them in all their glory. Fortunately we did see a few impressive sights such as an ice-bound waterfall (try photographing that with a blizzard stinging your face), and that Icelandic

staple - the geysers. (One thing that I'm pleased to say isn't affected by snow.)



Although trips to see the Lights are scheduled for every night during the winter months this depends on the weather and a decision is made around 7 pm. Fortunately twilight takes up several hours of an evening at these latitudes so you have plenty of time to rearrange your plans once you know whether it's on or not. I arrived on a Thursday but it was cloudy that night and the next so by

Saturday there were scores of would be Aurora spotters waiting for the call. Once the trip was confirmed I headed into town and celebrated at a local steak house with a rather nice puffin set meal (on my budget it was that or whale) in anticipation of the night's wonders.

By the time I got back to the hotel there were scores of people waiting for the coaches. Add in the other hotels and I would estimate (very roughly) that by 1 o'clock in the morning there were over 500 of us pretty much in the middle of nowhere experiencing sub-zero temperatures hoping for something special. If you think standing in a field in Hertfordshire in December to see some meteors is chilly, you don't know the half of it.



It wasn't to be a night for nature in all her glory. Looking at the horizon you got an occasional glimpse of a wispy green column but these were fleeting and I was surprised that my picture came out as well as it did. If only I'd gone in February.

As for Iceland - well I want to go back sometime, the country has a lot to offer and I was particularly unlucky with the weather. I suspect it will be around the autumnal equinox though, somehow I think the landscape will be a lot more colourful then.



PHOTOS

Twilight in Reykjavik; a frozen waterfall and what Mitchell just about managed to glimpse of an Aurora

Keeping it in the Family

Members of the Society seem to have many hidden talents. It recently came to light that our Junior Committee member, Nicholas Lucas, not only has a keen interest in astronomy, space research and science in general, but was also a cook! This was revealed when he appeared on the ITV-1 early evening programme, *Britain's Best Dish*. Here each programme puts two contestants up against one another in starter, main course and desert rounds, eliminating one out of the pair each day, who then go on to another elimination round at the end of the week.

Nicholas had chosen to make a starter and he was up against - his sister Georgia! This was, apparently, not only two of the youngest cooks the programme had ever had, but the first time it was brother against sister - true sibling rivalry.

Both chose dishes with a Cypriot flavour, with Nicholas cooking *pork koupes with a beetroot salad*, while Georgia cooked *rissoles stuffed with quail*, served with a *side salad and red wine jus*.



Both dishes were very well received by the three judges, but Nicholas just pipped his sister, with two votes against one. He consequently went onto the Friday contest, but lost out to a starter of *haddock and scallop quenelles*.



Left : Georgia and Nicholas present their dishes to the judges; above, Nicholas' dish - *pork koupes with a beetroot salad - and a 'mouse' lemon*.

CHAIRMAN'S QUARTERS



 *This is the dawning of the Age of Aquarius.* By quite a coincidence, the symbol for this Zodiac Sign is the two squiggly lines, reminiscent of the stylised representation of radio waves. Just about everything today involves some sort of transmission of data using a variety of carriers – light, radio, electricity, you name it. This data is also being stored in vast quantities and at an ever increasing rate. In older times data was collected in situ and written down on paper by whoever was collecting it. With the advent of magnetic media (tape, then floppy and now hard disks) a lot of this information has been transferred from paper to these media. Not only that, much of the information is now being collected mechanically, without human intervention, and stored directly. This introduces some quite interesting problems.

Firstly one has to know where the data has gone. This might sound trivial, but data management is an important issue and, in large organisations, who has access to the data is often a factor. Analysis of the data is the next problem. With so much data, display of it in a (human) sensible manner is a key issue. Images from space now cover wavelengths which not perceptible to us. This has given rise to 'standardised' colour coding of images which are often quite beautiful, apart from the technical information which they carry. Analysing and processing non-image data introduces new challenges. In older times the data would be displayed graphically and some sort of interpretation would be derived. Today complex software has to be used to display the data and where commercial software does not exist, the user will have to invent a suitable interpretation model and then write the software for it. On top of all that, sifting through the data and deciding what are 'valid values' becomes a real test for interpretation.

With so much data coming in, much of it ends up lying around not even being looked at. As an example, a significant amount of data sent back from the Voyager missions in the 1970s has still not been looked at! What is coming in from space now, dwarfs that. Where it becomes interesting is, again, how the data is processed. Some is very easily machine processed but there is a lot that can still only be human processed. How this is all used can be fascinating. In the early 70's Brian May was writing a thesis on the Zodiacal Light but took a protracted sabbatical to seek his fame and fortune elsewhere. 30 odd years on, he returned to finish the thesis and found a wealth of data which was unthinkable at the time he started! He received a well deserved PhD for his efforts. On a slightly different track, image interpretation is very error prone when performed by computer. In 2007, Galaxy Zoo was launched so that humans could classify galaxies imaged by the Sloan Digital Sky Survey. Today nearly 400,000 people are involved analysing the images in ways that computers cannot (and still seeing galaxies never noticed before!). As a final testament of what human processing can do, I was at an electronics exhibition just the other day and was being shown a machine that could solve a Rubik's Cube on its own. Its record was 19 seconds – the human record is 5 seconds!! Impressive as the machine might be, it actually took several months of programming and several 'processing years' of table generation to make this possible. People can learn to solve the Cube in less than a week. *"The Data Is Out There" – "We Can Still Use it Better!"*

See you at the meeting,

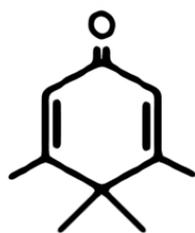
JIM

Name that Chemical!

Jim Webb

Ok, we'll clean it up a bit this time. "By George" you might exclaim – well, there is a 'George'. Apparently, an undergraduate at Columbia University synthesized a new cage structure and asked his supervising professor to name it. The Prof arbitrarily gave it the trivial name 'George'. It was then found that when George was heated with a Rhodium catalyst, it dimerised to produce *Bi-George*!

Some names are of course, not quite that arbitrary - like *Snoutene*. This little oddity has a shape that looks like the nose or snout of an animal, but I have no idea if it smells...



Another 'shape-name' is *Penguinone*. This gets its name from the fact that its 2D structure bears a similarity to a penguin. Not quite the same in 3D, though. Its proper name is *3,4,4,5-tetramethylcyclohexa-2,5-dienone*, so there.

Some are named after their major element - like *Germane* (Greer?). GeH_4 - is it relevant or pertinent? Who knows? Some suggest an origin that might be its structure, but isn't. *Syringic Acid* springs to mind. This is actually named after the lilac plant, from the Latin name for the lilac, *Syringa*. The lilac bush has hollow sticks which were used in ancient times to make flutes. In fact, there is a kind of flute that is called '*siringa*' in Spanish. This Latin term was eventually used as the name for the hollow needles used to inject liquids in the body, ie syringes. Even stranger, syringic acid is also found in blueberry plants, which, in Latin, happen to be called *Vaccinium*. Coincidence? As an aside, there is also *Vaccenic Acid*, also called *Asclepic Acid*, possibly named after *Asclepius* - the Ancient Greek god of medicine and healing.

Some names appear to be more than they suggest. *Catherine* is not wheel shaped but its name comes from the plant *Catharanthus roseus*. *Complicatic Acid* was not named that because it was complicated to make, but from the plant *Stereum complicatum* out of which it was extracted. *Jesterone* is not a playful or mischievous molecule but is found in the fungus, *Pestalotiopsis jesteri*, which lives inside yew trees. *Gigantine* doesn't come in very large bottles but is extracted from the cactus *Carnegiea gigantea*, and is a hallucinogen - maybe it just makes everything appear gigantic. And finally there is *Germylene*, the radical GeH_2 , which is not an antiseptic but is **very** toxic. There will be more.....



And the picture? *Carnegiea gigantea*, otherwise know as the Saguaro cactus.

SKY VIEWS

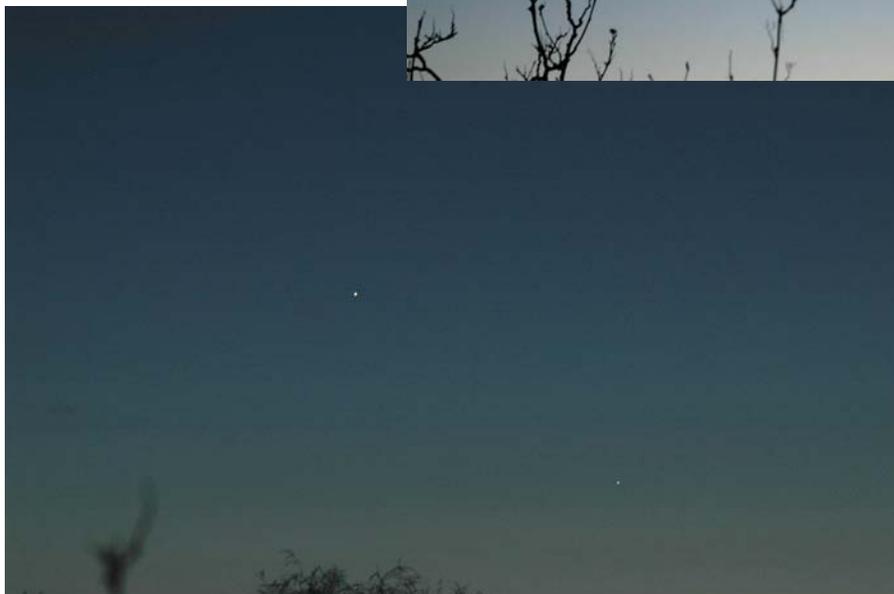
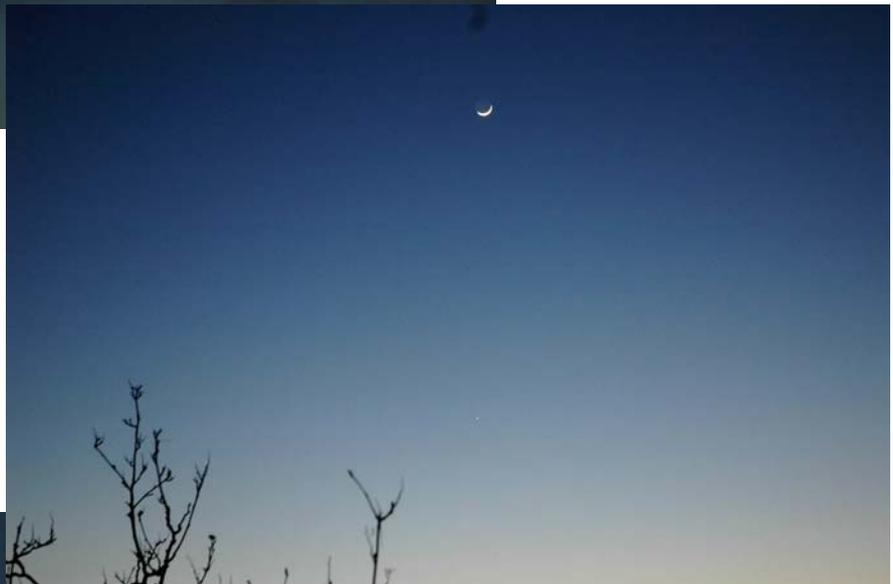
March saw some interesting appearances in the western skies. As you will have read in recent 'The Night Sky', this was to be the best appearance of Mercury for this year, plus the last look at Jupiter for the time-being. And add to that a first-quarter crescent Moon.



Left : the crescent Moon and Jupiter, 6th March 2011, below, by the next day, the Moon is now much higher in the sky.

(Jupiter is directly below the Moon, just above the tree branch)

[NOTE - These two images were also shown last month]



Left Jupiter (above left) and Mercury at their closest approach, 13th March.



After this closest conjunction on 13th March, the skies played up for the next week or so, and all you got what can be seen on the left.

(Note this was shot on a wide-angle lens, the church tower is not actually imitating the Leaning Tower of Pisa!)

But for Mercury's highest position in the sky, on 23rd, the horizon did clear long enough of this shot - the length of exposure can be judged by the aircraft trail!



After that, no more planetary appearances.

Mercury would have been lost in the twilight anyway by the end of the month, as was Jupiter as it was in conjunction with the Sun on 6th April. However the dust, present in the atmosphere in general at the current time, did lead to some very nice sunsets.

Photos: Mat Irvine

The Night Sky : April - May 2011

THE PLANETS

MERCURY : Was in conjunction on 9th April, moving into the morning skies. The greatest elongation will be on 7th May, but the next best viewing opportunity will not be until the morning appearances in September. Mars will be about two Moon widths to the south on 19th April, and Mercury about four Moon widths to the south of Mars on 20th May. Moon close during the early morning of 1st May. (Also see Sky Views.)

VENUS : The planet is in the morning skies in Sagittarius. Jupiter is close by on 11th May.

MARS : Not easily viewed for the first half of the 2011, as the planet was in conjunction with the Sun on 4th February. The best viewing will not be until September, and even then the planet will only be five arc-seconds in apparent diameter. It will be last week of 2011 before Mars will present any significant viewing opportunities, but even then the best opportunities will have to wait a year until March 2012.

JUPITER : Was in conjunction with the Sun on 6th April. (Also see Sky Views.) Good viewing will not reappear until around mid-July, but then will be higher in the sky than previously and will have far better opportunities for excellent viewing.

SATURN : At opposition on 4th April. The planet will spend the whole of the year in Virgo, in the evening skies for the first half around 0.4 Magnitude, and, after conjunction, 13th October, will re-appear in the morning skies. The rings are well placed for viewing this year, even in a small telescope. Moon 8° to the south on both 17th April and 14th May.

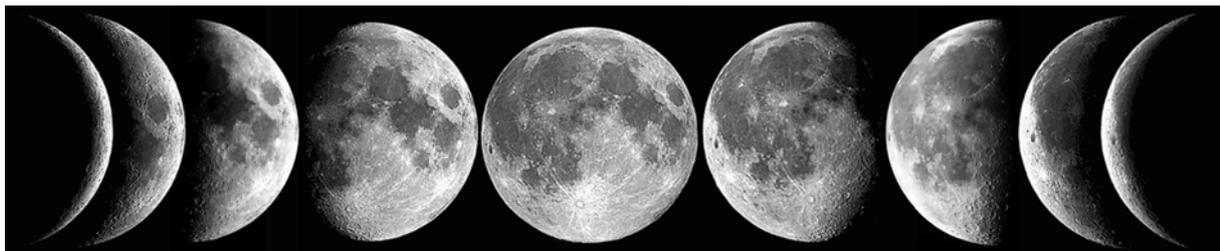
URANUS : Was in conjunction with the Sun, 21st March. Moon to the north on 30th April.

NEPTUNE : In Capricornus, heading towards Aquarius. Moon to the north on 27th April.

METEORS

The next meteor showers are the Lyrids, peaking 23rd April, and Eta Aquarids, 6th May

THE MOON



NEW 3rd April
NEW 3rd May

FIRST 11th
FIRST 10th

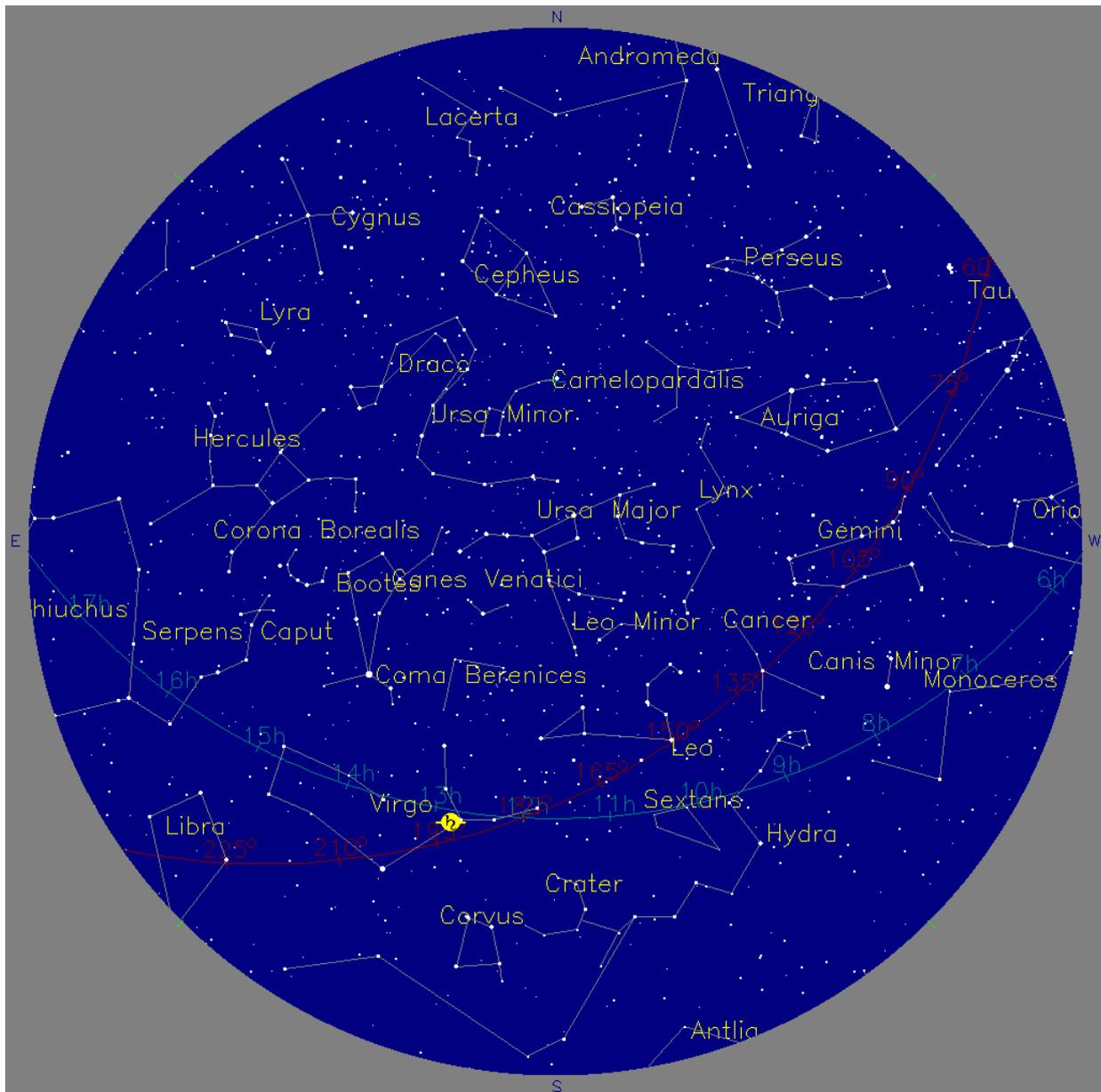
FULL 18th
FULL 17th

LAST 25th
LAST 24th

NEW 3rd May
NEW 1st June

THE NIGHT SKY : APRIL- MAY

As of 1st May 2011, 21:00:00 BST



KEY			
	MERCURY		SATURN
	VENUS		URANUS
	MARS		NEPTUNE
	JUPITER		PLUTO