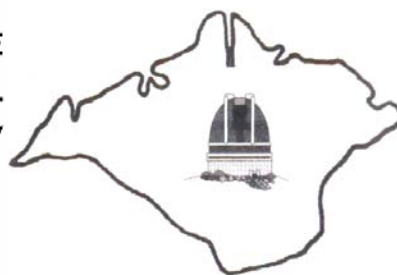


THE NEW ZENITH

THE MONTHLY
MAGAZINE OF THE
VECTIS ASTRONOMICAL
SOCIETY



VOLUME 15 No 1

FEBRUARY 2007

SOUTHAMPTON THREATS TO NIGHT SKY

Just before Christmas last year I became aware of the following:

Southampton City Council Press Release

City leaders unite to light up Southampton 19/12/2006

An exciting and innovative new project, not seen anywhere else in the world, is being planned for Southampton by city leaders. The project entitled 'The Southampton Laser Gateway' will create a monumental landmark for everyone approaching the city by sea, air, car or rail. Funded through the Southampton Partnership, the city council has been awarded £249,000 to develop this iconic feature in the city centre.

Four lasers will be installed in the Clock Tower of the Civic Centre. They will emanate a 2.7mm diameter beam of light in an east-west and north-south orientation and be visible up to fifteen miles away. It is expected that the lasers will run from dusk to midnight, providing a visual 'welcome to Southampton' for miles around.

In keeping with Southampton's long maritime tradition the lasers will give the visual effect of a lighthouse shining its beams across the city. The inauguration will be timed to coincide with the 95th anniversary commemorations to mark the loss of the R.M.S Titanic. Councillor Adrian Vinson, Leader of Southampton City Council said: "The laser gateway is a visually dramatic expression of Southampton's place at the heart of the central south, reflecting our city's innovative and creative strengths. Investing in

the image of our city is extremely important if Southampton is to continue to achieve economic success." The Chair of Southampton Partnership, Ros Cassy commented: "This investment of SEEDA funding by the Southampton Partnership is a tangible example of how we are committed to promoting Southampton and its heritage through developing cutting edge projects. "I am delighted that we have been able to work with a team of people to translate our aspirations for the city into this ground breaking project and really light up the city. Southampton has a proud maritime history and a commitment to innovation. Our laser gateway captures the essence of our city brilliantly." Sally Lynskey, CEO of Business Southampton added, "This project is an excellent example of partnership working in Southampton. Each organisation involved is committed to enhancing the city's image and this stunning landmark is sure to do just that. The Southampton Laser Gateway will be a beacon for the city."

Jimmy Chestnutt, Director General of Southampton and Fareham Chamber of Commerce said: "The Chamber supports this initiative as the first and highly visible step towards raising Southampton's profile as a modern, hi-tech, forward thinking, successful city." Southampton City Council's Cabinet is expected to make its decision on January 22 2007

My response to this is on Page 3

John Langley VAS Director Astronomy Services

FROM THE EDITOR

Dear Readers

Just when all should be peaceful for astronomers, the unthinkable happens. Elsewhere within these pages will be found what Southampton City Council are planning to unleash on our night skies. Should you feel sufficiently aggrieved about the desecration of our rightful playground, then write a letter to our neighbours up Southampton Water. Address your feelings to The Civic Centre, Southampton, attention Mr Wiseman. (See Stop Press below)

Apart from that and the surrounding kerfuffle, it has been a very quiet holiday between Christmas last year and the New Year celebrations. I hope that Peter Burgess has cracked open his well-won bottle of Editorial wine for winning the * competition. (If you want the solution, send me an email) Several of you gallant readers sent in solutions to the hidden asterisks in last year's final New Zenith, but Peter's was the fastest and the most elegant of all. No only had he identified all the locations as requested, he had backed them up with neat red circles around the symbols. "Far too easy," was the general opinion, but be warned, the next game will be a little more difficult. Watch this space! All the best. Cheers...



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NEXT MONTH'S LECTURE

February 23rd

Stellar Collisions

**Dr Tom Maccarone
Southampton University**

**7:30pm
In the Parish Centre
Town Lane
Newport**

February 2007 Subscriptions

Will the following members please note that their subscriptions are now due. As usual, all cheques should be made payable to the Vectis Astronomical Society and sent to my Winford address.

As the costs of postage continue to rise it would be appreciated if Members paid their annual fees due as soon as listed here and so reduce the need for reminder letters.

Thank you

**John W Smith, 27 Forest
Road, Winford, Sandown,
IoW. PO36 0JY**

STOP PRESS

The Southampton meeting of the Council Cabinet to decide upon the laser project has been delayed until February 5th. You still have time to contact them with your thoughts.

Councillor Wiseman seems to have his email inbox turned off so submit comments to gateway@southampton.gov.uk

marked for his attention

245	Mr L Gladdis	£17
246	Mr R Gladdis	£17
268	Mr S Jones	£13

30 December 2006

Dear Southampton City Council

Many congratulations for your breath-taking plans to welcome visitors to your fair city with a sky-polluting laser light show!

On the other hand, whoever dreamed up this misguided project has no consideration for our fragile night sky environment.

For years the dark skies of the Isle of Wight have been severely desecrated by orange glow emanating from Southampton's public lighting systems (and this applies to Portsmouth and its surroundings, too).

Rare sightings of the Northern Lights are technically feasible from our Island but are overwhelmed by your sky glow, visible from miles away.

Amateur astronomers are continually supporting professional observatories around the world since there are many more of us with telescopes that range far and wide: the principal observatories only cover smaller and smaller areas of sky in minute detail. One result of this support is that amateur sources discover many of the transient phenomena ahead of the professionals. As an example, one of our VAS members has been awarded special accolades from the Astrophysics Department of University of Cambridge for his work on faint variable stars. Not bad for a 'mere' amateur?

So now you wish to despoil our night skies a little more... What a dangerous precedent you will set. Use of sky beams as advertisements is illegal, as witnessed in a court case where a Guilford night club was forced to remove offending light beams in the sky. They were deemed to be advertising their presence, much in a way as you appear to propose. Commercial interests will attempt to follow your example, of course.

In the opening paragraph of your press re-

lease, it is claimed that this usage of lasers has never been seen before in cities. I disagree: what were those 'mean and miserable' displays doing along London's Oxford Street many Christmases ago? Spectacular they were not, and were given the thumbs down by the visiting public expecting awesome displays. Perhaps they were sold off and snapped up at bargain prices by your own organisation?

Some background information: at the behest of amateur astronomers throughout the UK, the Campaign to Protect Rural England (CPRE), the Campaign for Dark Skies (CfDS) and HM Government have all cooperated in bringing about the Clean Neighbourhoods and Environment Act 2005. *Inter alia*, this Act provides for the elimination of sources of light pollution of our night skies. Enlightened minds have realised that future generations should have the chance to wonder at the beauty of star formations and to discover just how much humankind is related to the stars themselves. I am not speaking in astrological terms here – just cold, hard scientific facts.

Your plans to spend SEEDA (i.e. Government) money to destroy a little bit more of our children's heritage, when the same Government has decreed that all attempts must be made to restore what has already been lost to us, seem to fly in the face of public opinion.

And what does the Civil Aviation Authority think about the invasion of UK airspace?

I wish you all a prosperous New Year and await your comments

Yours faithfully

John Langley, Director of Astronomy Services, Vectis Astronomical Society, Isle of Wight.

(They did not reply)

February Skies

John W Smith

The Planets

Mercury is now well placed in the evening sky due south west during twilight. This Planet is quite star-like, but is rather faint so it should not be confused with the much brighter Venus.

Venus now presents a good image and will be found in the south west. It is gaining in altitude so will be an excellent object for viewing over the coming weeks. Being so bright it can be seen before sunset.

Mars is gradually becoming a more visible object in the morning sky but it will be some time before it becomes an object for serious study.

Jupiter is in the constellation of Scorpius and on the night of 14th/15th passes close to the crescent Moon. It is rather low in the south so a good horizon will make its location easier.

Saturn will appear at its brightest for the year when it passes opposition on the 11th of the month.

Uranus and **Neptune** are not favourably placed for viewing.

Meteor Showers

There is only one worthwhile active shower this month:

1* The alpha *Aurigids* should peak at around 10 per hour between the 6th and 9th of the month.

Moon Phases

New	1st Quarter	Full	Last Quarter
17 th	24 th	2 nd	10 th

Deep Sky Objects for small telescopes and binoculars

M41 NGC2287 An open cluster of some 50 stars in Canis Major. This object lies about 2000 light years away and its most striking feature is a red star near its centre.

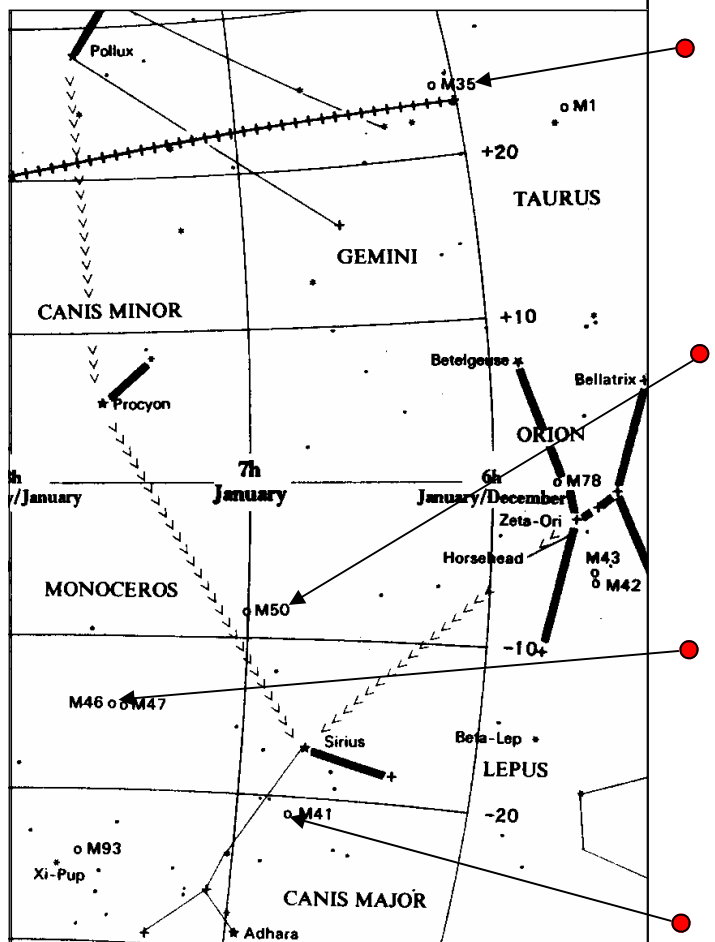
M35 NGC2168 This cluster of around 120 stars is 3000 light years distant and is a good object for low power or binoculars. There is a smaller open cluster NGC2158 that may be seen in the same field.

M50 NGC2323 in Monoceros is a good object for binoculars and lies about 2,500 light years away. It is close to the galactic equator looking away from the nucleus of the Milky Way.

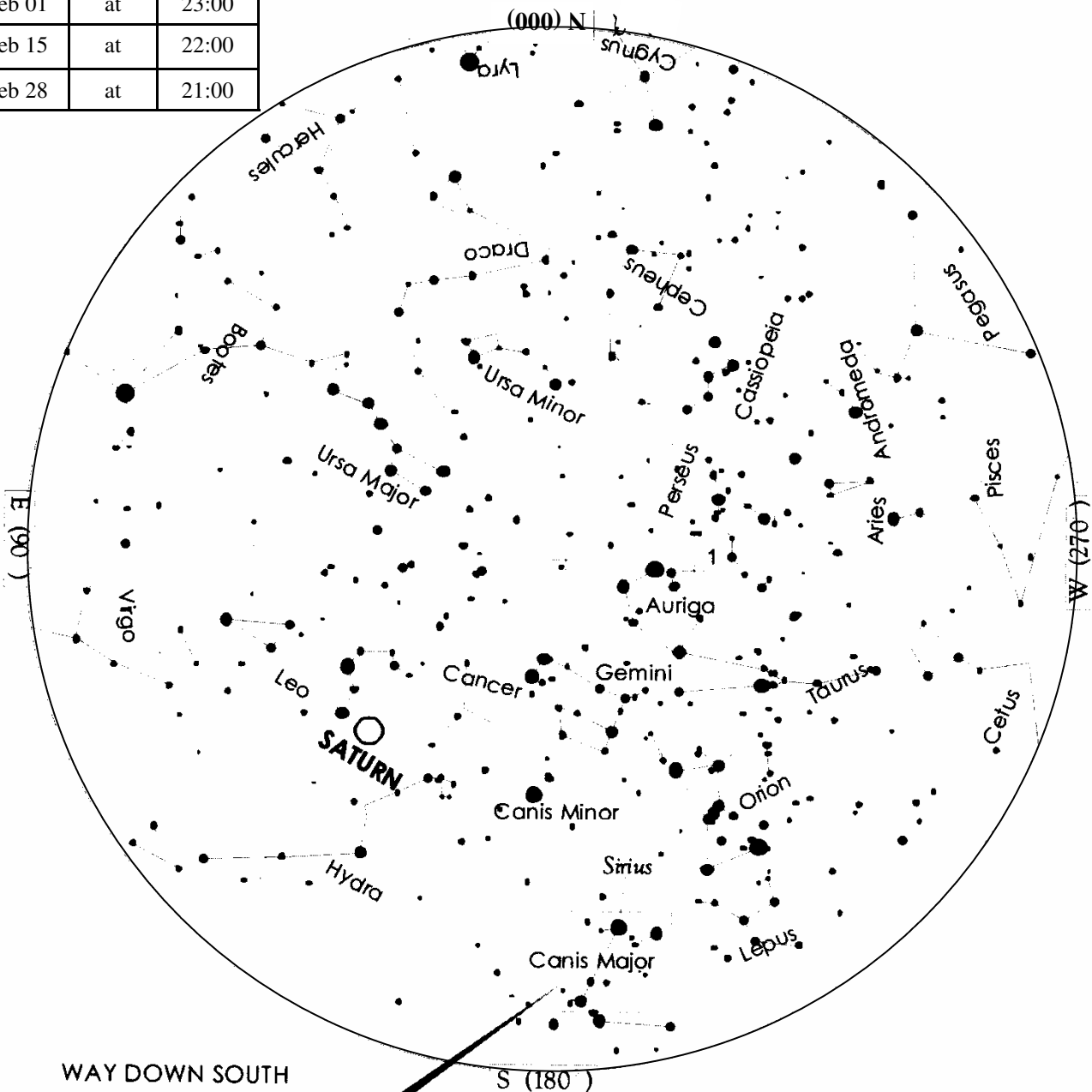
M46 NGC2437 This cluster in Puppis contains around 150 stars. It has a rich concentration of bright stars and is famous for a planetary nebula, NGC2438, but this object is not part of the cluster as it lies some 300 light years closer to us.

Coordinates

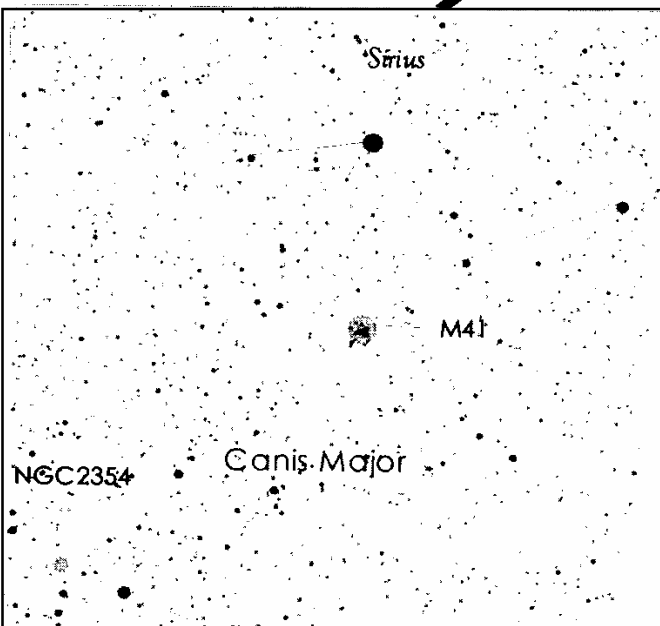
OBJECT	RA	DEC	MAG	SIZE Arc mins
M35	06h 08m	+24deg 21m	6	40
M41	06h 46m	-20deg 43m	6	30
M46	07h 41m	-14deg 46m	7	24
M50	07h 02m	-08deg 19m	7	16



Feb 01	at	23:00
Feb 15	at	22:00
Feb 28	at	21:00



WAY DOWN SOUTH



Often missed because of its low altitude is a wide and bright open cluster in Canis Major, designated M41.

Though visible to the unaided eye, binoculars offer the best wide field view. Further down lies NGC 23454 - a smaller and fainter open cluster, which is a better view through a telescope.

To the left of Canis Major lies the Milky Way and a scan with binoculars reveals many 'knots' of stars.

Further to the Soton Saga...

Details of Southampton's plans were forwarded to the Federation of Astronomical Societies (FAS) requesting that the news be spread around member societies. This really got the ball rolling! Also contacted were the Campaign to Protect Rural England (CPRE); Campaign for Dark Skies (CfDS); *Astronomy Now* and *BBC Sky at Night* magazines. All in all the whole thing snowballed. CPRE called upon MPs who were sympathetic to the preservation of our night skies to put pressure where it would be most felt, and the next thing we knew was that the Astronomer Royal had got into the act.

Apparently, the designer of the Soton laser project had been quoting the presence of the laser atop of the Greenwich Observatory in London, to celebrate the Millennium by shining along the zero degrees longitude bearing, as a precedent.

Sir Martin Rees was quoted in this statement read out verbatim from the British Astronomical Association at the Southampton Cabinet meeting held on Monday 8th January:

"This is a message from a spokesman for the British Astronomical Association. The Millennium Meridian laser which shines along the prime meridian from the old Greenwich Royal Observatory is a low-power device compared with those proposed by Southampton Council, and its beam does not leave the urban area. However, astronomers have often expressed disquiet about this laser too, and in a conversation last week, the Astronomer Royal, Sir Martin Rees, said, and I quote: "I agree it would be bad if this were used as a precedent to justify further and more serious 'pollution'. I am going to be visiting there before long and will consult"

Having been given the opportunity to speak at the meeting, I was able to put in the following:

I had been briefed by CAA ex-colleagues about the dangers to aircraft operations and the crucial point was that the lasers MUST (their words and capitals) be set exactly horizontal in operation. Soton had put in print that the lasers would have an upward cant of five degrees which would result in the beam limit at 15 miles being around 7000 feet above sea level.

Soton believed that laser beams do not diverge from their original diameter, in this case 2.8 mm. Scientific experts from Rutherford High Energy Lab have calculated the divergence caused by interaction with dust particles and water vapour aerosols in the atmosphere would amount to around several metres in diameter at maximum range.

I informed the councillors that due to light pollution, the 2500 stars normally visible in a dark sky are vastly diminished in number. As an example, Londoners on one of their 'good viewing nights' were likely to have only some 50 stars visible. Carrying on with this theme, I said that on the Island we could see the Milky Way on most clear evenings whereas many children on the mainland have never had the chance to look up and see the galaxy we live in.

Vectis Astronomical Society (VAS) considers the laser project with dismay. It is likely to interfere with serious scientific study of distant variable stars that are the milestones used to calculate the size of the Universe.

Finally, I told the meeting that I actually liked Southampton and was sorry to witness the final voyage of the old Queen Mary from its home port. I had heard a whisper during a visit to the vessel at Long Beach, California, that Southampton would like to get the ship back. So much so that they would top any global bid for it by adding one dollar extra as their offer. From recent news items in the media it would seem that Soton are trying to realise this dream. I informed the meeting that if Soton wanted to boost tourism they should drop the laser project and concentrate on the Queen Mary's homecoming and then we would all stand with them, cheering.

The **Chairman of Solent Astronomical Society** described how during the past 40 years, increasing light pollution had finally caused him to move from Shirley to a darker area outside Southampton. He now finds that one of the beams will be directly over his house...

As the **New Forest Friends of the Earth** mounted a public protest outside the Civic Centre while the hearing was on, inside the chamber they expressed deep dismay over this urban intrusion upon a region of tranquillity where people went to see the stars in dark skies. **National Parks Authority** said that they had a statutory duty to enhance the New Forest NP. Describing the potential impact of the laser beams, the NPA speaker said that the south-pointing one would cross the Solent and pass over Newtown Creek. The east-facing beam would impact on the South Downs where a new NP was being set up. This scheme was not wanted in rural areas of great beauty and the Cabinet was advised to refuse the project.

The next meeting of the Cabinet was announced as being on 22 January, so, by the time you read this, more news will be available about what decision the Council arrived at.

JL

50 YEARS OF SPACE EXPLORATION

Towards the end of 2007 it will have been fifty years since Sputnik hit the headlines. The USSR space programme had finally become reality.

Those of certain years will remember the hysteria that greeted this news, not least from our cousins in the United States whose own programme seemed destined to a huge non-event when their Vanguard rocket managed to rise off the launch pad to a majestic altitude of some two feet, topple over and explode in front of the world's assembled Press. Dubbed The Flopnik, the US entry into the expensive world of space exploration had its nosecone rubbed into the dirt by the launching of Sputnik11 containing a dog by name of Laika, who survived the upward journey and sacrificed her life in proving that humans could expect to survive the stresses of rocket launching.

And so the rest is history, with Yuri Gagarin being the first human (USSR again!) in space and huge self-acclaim by the Soviets, lauding their success over the shocked might of America.

So how does this impact, if that is an appropriate word, on VAS? Easy, is the answer. Your executive Committee is planning a star party event that will include satellite spotting down at the Observatory in the Autumn. The event is expected to cover three days in order to capture at least one clear night and will be open to the general public, very much like our last successful star party in 2006.

How can you take part in the event? If you have any memorabilia of early space travel that could be incorporated into an exhibition; or any verbal accounts of where you were at the time of Sputnik and why you remember the occasion so well, we would be pleased to hear from you. Any material borrowed for display at the Observatory will be carefully looked after and returned to the lender after the event. Verbal anecdotes could be recorded for a continuous commentary for visitors at the Observatory. We hope to obtain contemporary pictures and videos of 1957 to back up the show. Anything depicting what was happening in those distant(?) times will be considered.

COULD CAT'S EYES TRIGGER EPILEPSY?

Visitors to the Observatory may have noticed that the Fighting Cocks crossroad junction sports high-technology cat's eye lane markings. The devices are bright LEDs that pulse within the persistence of human vision to appear as a continuous source of light. Powered by solar-charged batteries within the base, the cat's eyes provide a safety factor for traffic using this section of the Arreton Road and its junction with Watery Lane and Bathingbourne Lane. Without their presence, it is likely that the Council's Highways Department would have installed street lighting, to the detriment of the Observatory.

It has now come to pass that these new cat's eyes have been fitted along the A12 at Witham in Essex at an accident black-spot. A lady motorist claims that the blink rate of these cat's eyes triggered off an epileptic fit in her 17 year old daughter who was passenger in her car one night along that road. The daughter said that the strobing of the LEDs had made her feel unwell.

The British Epilepsy Association have now called for the Highways Agency to investigate the possible risk of LED-induced seizures in epilepsy sufferers. The Highway Agency has accepted the complaint and will be investigating the effect. In the meantime, no more LED studs will be installed on UK roads until their effect on Britain's half million epileptics has been checked.

CUB SCOUTS WORKING FOR ASTRONOMER BADGE

The Observatory is hosting groups of Island Cub Scouts seeking to obtain their new Astronomer badge. To date we have got groups coming from Sandown, Newchurch and Gurnard to learn about the Solar System, the differences between stars and planets; identification of three constellations, gravity and the use of telescopes and binoculars. Any VAS Member associated with a local Scout/Guide group who might want tuition in astronomy is welcome to ask Bert Paice or John Langley to set up a training session for these astronomers of the future. Bert can be reached on bertpaice@btinternet.com and John's email address is on Page 10

WHAT IS GOING ON HERE?

Young VAS Member, James (“Deep-Fried”) Dymock, seems to have taken a shine to these two pussy cats but what is the connection with astronomy, you cry.

If told that the cats’ names are Ptolemy and Jeannie, are you any the wiser?

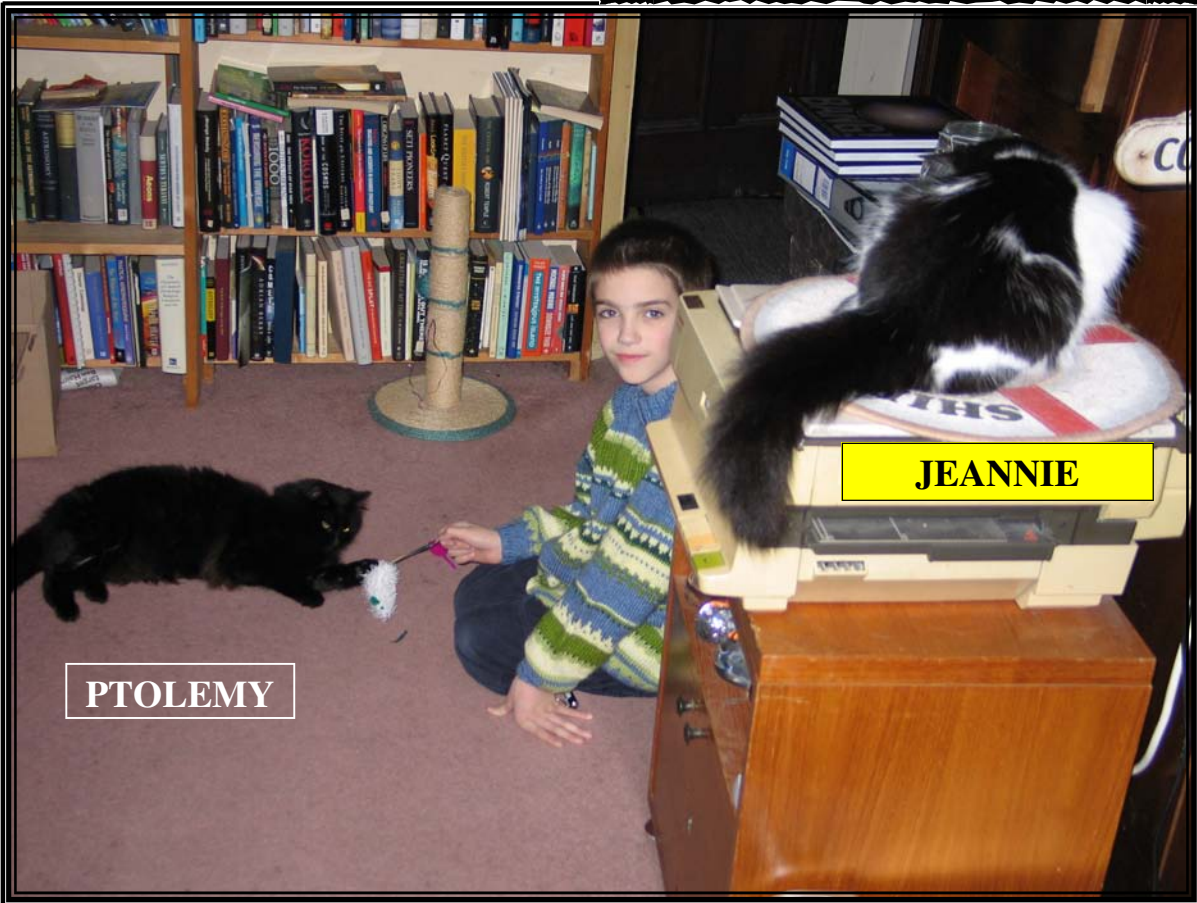
This is not a competition as such but should you want to contact the Editor with amusing reasons for showing this photo, please do so using the contacts as shown at the bottom of Page 10.

Good hunting...

Secretary Needed

The position of secretary to the Society has become vacant. Nominations and volunteers for the position are invited to tender their details to the Chairman for consideration as soon as possible. This is an opportunity for a club member to have more of an input to the running of a dynamic and very successful society. It should be noted that the duties of the post are not the traditional ones associated with the role, so the successful applicant will not have an onerous task.

Don’t delay, act today!



**THIS IS THE FINAL VERSION
OF OUR PROGRAMME FOR
2007.**

Since the provisional edition, which appeared last year in the December *New Zenith*, Roger Young has been getting quite good with his renowned juggling act. The main change is the July meeting which will be on July 20th, as shown in the table below. Not only a deviation from our usual 4th-Friday-of-the-month event, (**this one being on the 3rd Friday for those of you with splendid new diaries to fill in**) but this lecture promises to be the highlight of our year in prestige terms. The subject, Robert Hooke, was an Isle of Wight lad who made his way up from darkest Freshwater to London to confer with the likes of Newton, Wren and other eminent philosophers and architects in the 1600s. He was a master inventor and paved the way

towards the development of the marine chronometer, (by John Harrison) by his pioneering work on hairspring escapements used in timepieces.

Robert Hooke, by all records, was a man of turbulent temper and a bit of a loss when it came to his inattention to the publishing of his works. Largely unrecognised, even today, as being a man of brilliant intellect, Robert will surely be a welcome subject of the July Lecture. The talk will be publicised as being of interest to the Isle of Wight History Society and other like-minded bodies so expect to see the Parish Centre filled to capacity that evening. Get there late and you will not get in!

The rest of the Programme looks enticing as well. Roger has done us proud with his selections and I look forward to our Friday nights with eager anticipation.

Ed

January 26th	Is There Anybody Out There?	Bob Mizon	Coordinator, BAA Campaign for Dark Skies
February 23rd	Stellar Collisions	Dr Tom Maccarone	Southampton University
March 23rd	Introduction to the Night Sky	Peter Burgess	VAS
April 27th	Development of the Calendar	Keith Brackenborough	Eastbourne Astronomical Society
May 25th	Why Pluto had to go	Robin Gorman	Hampshire Astronomical Group
June 22nd	Stars that go bang in the night	Dr Robert Smith	Sussex University
July 20th	The Astronomical Researches of Robert Hooke	Professor Allan Chapman	University of Oxford
August 24th	Dark Matter, Dark Energy	Dr. David Bacon	Portsmouth University
September 28th	What Hubble is telling us, and a little speculation added	Rob Turner	FRAS, FIAA
October 26th	Eclipses	Alan Drummond	Croydon Astronomical Society
November 23rd	Telescopes and other Instruments	Richard Flux Barry Bates	VAS

INTERESTING FACTS

PART 28

PAPERWORK GONE MAD

The Financial Services Authority (FSA) handbook is vast and almost incomprehensible. The only way to look at it is via the FSA website search engine since, apparently, 'if printed out, it would produce a stack of paper nine feet high'.

Evidence to Lords Select Committee

Website of the Month

http://www.astrosurf.com/legault/iss_atlantis_transit.html

For a great shot of the International Space Station transiting the Sun's surface

(Please note copyright rules!)

CPRE Isle of Wight

GOOD LIGHTING AWARD

In conjunction with VAS, the Isle of Wight branch of the Campaign to Protect Rural England will be awarding its very first trophy at the AGM in May to an Island organisation found to have made extraordinary efforts to conserve our dark skies by installing environmentally-friendly external lighting.

VAS Members have eyes all over the Island and if you discover what you believe to be a fine example of how building or area illumination should be carried out then please contact the Editor who is coordinating this event. All nominations will be considered.

The trophy has been especially commissioned from IOW Glass Studio in St Lawrence, Ventnor and is engraved in gold.

Last Words

From a reader of the Daily Mail recently:

"In Ormskirk (Lancs), we're building a rocket to go to the Sun. Health and Safety have informed us that they will give permission only if we go at night."

Seems reasonable, given the fussy nanny-state we live in nowadays...Ed

Submissions to the NEW ZENITH are very welcome and should be sent to the following address

The Editor NEW ZENITH
'Keepers Lock', Youngwoods Way
Alverstone Garden Village
Sandown PO36 0HF
Tele: 01983 407098

E Mail: johnvl@tiscali.co.uk (any attached files in Word Document format, preferably)

FIND VAS ON THE INTERNET*

Members should note the Vectis Astronomical Society Website address:

<http://www.vectis-astro.org.uk/>

MATERIAL FOR THE NEXT ISSUE TO BE RECEIVED BY THE 6TH OF THE MONTH

The Vectis Astronomical Society and the Editor of the New Zenith accept no responsibility for advice, information or opinion expressed by contributors