



## Society News

### From the Chairman

Your society needs help. At the AGM on 27th August, a new Chairman and at least three new committee members will be needed. The roles of Observatory Director, Programme Organiser, Membership Secretary and Observatory Visits Co-ordinator need to be filled. None of these positions are particularly onerous, especially if all the other roles are filled. The Chairman, Observatory Director and committee members are required to attend the committee meetings, which are currently held on the Tuesday evening 10 days before the monthly meeting. The other roles can either be fulfilled by committee members or ordinary members of the society.

Our constitution states that we must have at least nine members on the committee, including the Chairman, Treasurer and Secretary. We really do need to get enough volunteers to fulfil this criteria. The Vectis Astronomical Society is a great club, with a good reputation both on and off the island. It would be a great shame to see the hard work the many society members have put in over the years, go to waste.

Personally, I am very proud to have been the Chairman of the Vectis Astronomical Society for the past three years, but, as I have said previously, I believe the society needs new blood to stop it going stale. We have 120 members. Surely someone out there would like to get involved?

If you do think you can spare some time for the society, please do put your name forward. You can either speak to me or talk to any member of the committee - many of whom are at the observatory on a Thursday evening.

*Clear Skies*  
*Dr Lucy Rogers - Chairman*

**VAS will be revisiting the**

**Wellow Institute**

on

**13 November 2010**

**If you can help, contact Brian Curd for up to the minute details on this event.**

### VAS Website: [www.wightastronomy.org](http://www.wightastronomy.org)

Submissions or letters to New Zenith are always welcome and should be sent to:

**The Editor New Zenith**  
35 Forest Road  
Winford

**Sandown PO36 0JY**

Tel: 01983 864303 or email: [editor@wightastronomy.org](mailto:editor@wightastronomy.org)

Material for the next issue by the 6th of the month please.

### VAS Registered Office

Castle Haven Cottage, Castle Haven Lane, Niton Undercliff, Isle of Wight, PO38 2ND

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

Registered Charity No 1046091

### Observatory Diary


<b>Monday,</b> 19.30hrs	<b>Members Only.</b> Telescope and night sky training.
<b>Tuesday,</b> 19.30hrs	<b>Members Only.</b> Education evening - self-help for those on external courses, such as GCSE Astronomy, Open University etc, or for general astronomy questions.
<b>Thursday,</b> 19.30hrs	<b>Members and Public.</b> Informal meeting and observing.

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## Monthly Meeting Calendar 2010

Please keep an eye on the website for up to the minute information.

Travel for our monthly speakers is sponsored by:		
		
Date	Subject	Speaker
Apr 23	How Astronomy Has Changed	Dr Lilian Hobbs (Southampton AS)
May 28	What's Wrong With the Sun	Stuart Clark
Jun 25	TBA	Robin Gorman
Jul 23	TBA	Mark Sullivan
Aug 27	TBA	Greg Smye-Rumsby
Sep 24	Around the Universe in 45 mins	Grant Privett
Oct 22	The Lunar Imaging World Record Attempt	Ninian Boyle
Nov 26	The Big Questions In Cosmology	Stephen Serjeant (Open University)

*All details correct at time of publication.*

## Observatory News

### **The Dome**

The dome is now back in working order thanks to: *Bill Johnston, Jerry Green and Peter Burgess.*

### **Key Arrangements**

A couple of changes have been made to the internal locks at the Observatory. Simply put, the lock to the store area and the dome have been swapped over.

*Contact Brian for more details.*

## Your Society Needs You!

In August, a few members of Vectis Astronomical Society's committee will be standing down from their roles. Please consider standing for a place on the committee. We need to fill the posts of:

- Chairman
- Treasurer
- Observatory Director
- Membership Secretary
- New Zenith Printer
- Program Organiser and
- Observatory Outreach Co-ordinator

It would be great to see some new faces on the committee. We now hold the committee meetings on a Tuesday evening, so if you couldn't make the previous Friday committee meetings, I hope you will consider these new arrangements.

*Clear Skies  
Dr Lucy Rogers - Chairman*

### **VAS Summer BBQ**



A date for your diary - and with plenty of warning:

**Fort Victoria**

**Saturday 26th June**

**Mid afternoon onwards**

**Bring your own food and drink**

Paul has booked 3 BBQ's and is happy to open the Planetarium etc.

The BBQ is open to all Fort Victoria shops.

## This Month's Night Sky

### Moon Phases

New	1 <sup>st</sup> Qtr	Full	Last Qtr
14th	20th	27th	6th

### Planets

**Mercury** - For the first half of the May, Mercury is between us and the Sun. The morning apparition in the latter half is very poor for observers at our latitude - at best it is barely 10° above the horizon at sunrise; this will make any observation very challenging.

**Venus** - The evening apparition continues to improve as Venus climbs away from the Sun getting higher in the sky at sunset. By the end of the month Venus reaches its greatest altitude above the horizon at sunset for this apparition. The Moon passes close by on 16<sup>th</sup>

**Mars** - Mars is now quite small and well into the south west as the sun sets. Through May it moves eastwards quite quickly towards the bright star Regulus in Leo, by the end it's only 15° above the horizon as darkness falls. By then, though still visible, because of its diminished size and position Mars becomes unfavourable for observation.

**Jupiter** - At the start of the month sharp eyed early morning observers may catch sight of the king of the planets in the hour before sunrise if they have a good eastern horizon. By the end of the month it is about 20° clear of the horizon by sunrise, but with the long summer twilight it will not be an easy target for any serious observation.

**Saturn** - Saturn is well placed for observation from darkness, when it is in the southern sky until it sets in the early hours. Look for the bright yellow tinged object between the bright stars Regulus and Spica. The rings are only open a few degrees, it will be some time before they are like this again so take the opportunity to see this rare sight.

**Uranus** - Although it is moving away from the Sun Uranus is low down in the sky and does not clear the horizon sufficiently to be observable before the sun rises.

**Neptune** - Although Neptune rises an hour before Uranus it is still so low down in the pre-dawn sky that it is a very challenging object, not made easier by the decreasing hours of darkness.

### Occultations

Between 02:27 and 03:16 on the 28<sup>th</sup> the full moon will occult the 3<sup>rd</sup> magnitude star Al Niyat in Scorpio.

### Deep Sky

**M3 Glob. Cluster R.A. 13h 42m Dec 28° 22' mag 7**  
Messier's first original discovery, this is a showpiece globular cluster with stars extending across an area greater than that of the full Moon. M3 contains more variable stars than any other globular.

**M94 Cat's Eye Galaxy RA 12h 51m Dec 41° 4' mag 8.1**  
This is a face on spiral galaxy with tightly wrapped arms ringed by bright new stars. This indicates that the galaxy may have been in a collision in the astronomically recent past. The visual appearance is of a bright core surrounded by a faint evenly illuminated oval halo. The spiral arms are too tightly wound to show any detail in all but the very largest amateur telescopes.

**M64 Black Eye Galaxy RA 12 57m Dec 21° 38' mag 9**  
The black eye galaxy gets its name from the dark dust lane that crosses its centre. It will need a dark sky and high magnification to spot the 'eye'.

### Meteors & Asteroids

The Eta Aquarids a shower whose duration is from April 19<sup>th</sup> to May 28<sup>th</sup> peaks on the 5<sup>th</sup>/6<sup>th</sup> with a zenith hourly rate of 60. The peak is rather broad so look for these meteors between the 4<sup>th</sup> and 7<sup>th</sup>. The radiant for this shower is low in the south east in the predawn sky reducing the number of meteors actually seen to about 10 per hour. This year the light from the last quarter moon sitting close by will dampen still further this display from the remnants of Halley's Comet.

*Peter Burgess*

## Robert Hooke Freshwater's Famous Son

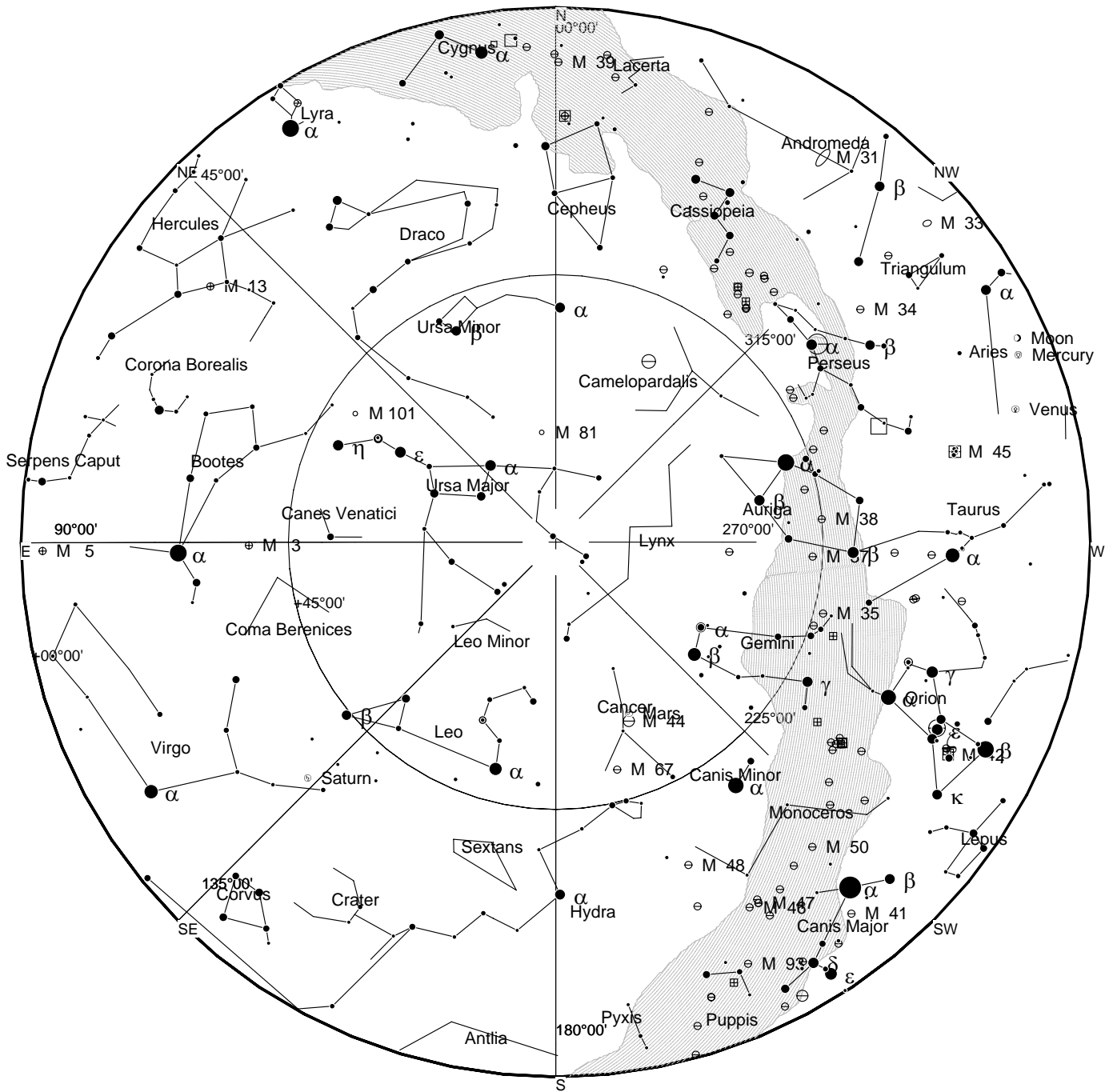
**Dr. Allan Chapman - Oxford Science  
Historian, TV and Radio Personality  
speaks at the Freshwater Memorial Hall,  
8.00pm on Thursday 13th May**

All are welcome to this entertaining and illustrated talk by the man who has done so much to restore and promote the reputation of our Island Genius

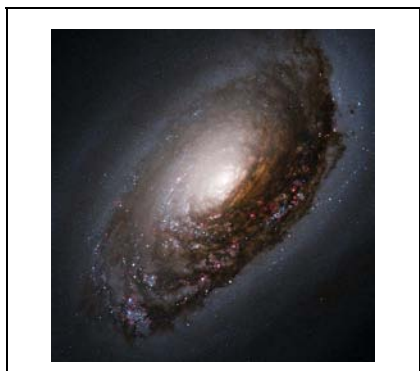
This meeting precedes the Hooke Inaugural Walk the following morning

No Entrance Charge, though donations to the Hooke Memorial Fund are requested

# This Month's Sky Map



View from Newchurch Isle of Wight UK - 2100hrs - 15 May 2010



**The Black Eye Galaxy** (also called Sleeping Beauty Galaxy; designated Messier 64, M64, or NGC 4826) was discovered by Edward Pigott in March 1779, and independently by Johann Elert Bode in April of the same year, as well as by Charles Messier in 1780. It has a spectacular dark band of absorbing dust in front of the galaxy's bright nucleus, giving rise to its nicknames of the "Black Eye" or "Evil Eye" galaxy. M64 is well known among amateur astronomers because of its appearance in small telescopes. It is a spiral galaxy in the Coma Berenices constellation.

*This article is licensed under the [GNU Free Documentation License](https://www.gnu.org/licenses/old-licenses/fdl-1.3/en.html). It uses material from the Wikipedia article "Black Eye Galaxy"*



## Star Party Report

The dark skies over the Island drew over 85 astronomers from across the UK to the third Isle of Wight Star Party. The event was held at Brighstone Holiday Centre, from Thursday 11th to Monday 15th March. It proved very successful as the skies cleared, at least in part, for all four nights. On the Sunday, some of the hardier members only went to sleep after they heard the Dawn Chorus.

Relative to other sites in the UK, the island's skies are up with the best in terms of darkness and lead the rest in the number of clear nights. As there is so little light pollution on the island, especially in the south, objects such as the Milky Way can be seen with the naked eye. The island is therefore becoming popular with astronomers and some local accommodation providers are becoming aware of this. Many switch off unnecessary lights, provide late breakfasts and have a secure place to leave telescopes.

Owen Brazell, the assistant director of the British Astronomical Association's Deep Sky Section, brought his 20 inch Obsession Dobsonian to the event "We had some awesome views of M42 and M43. I am not sure if I have seen the striations on M43 that clearly before," he said. "We also saw the Horsehead in Orion early using the 21mm eyepiece and an H-Beta filter. It was relatively easy to see if you know what you were looking for but faded into the murk quite quickly over the observing run. This meant that N2024 and 2023 were also seen in the general area."

Astrophotographer John Slinn was one of ten members from Guildford AS attending the event. He managed to take photos of Comet Siding Springs, which, he discovered after processing, showed the comet breaking up before it was imaged by larger, professional telescopes.

Mr Slinn's photos have been published by Astronomy Now magazine and by the Faulkes Telescope Project.

The IOW Star Party is becoming a regular event, based around the new moon in March. This means it's on before the main tourist season, which is great for the Holiday Centre and other local accommodation providers and businesses, and there is a good chance of clear skies when we still have plenty of hours of darkness.

Daytime activities were also arranged, including visits to the Island's Observatory in Watery Lane, Newchurch and to two private observatories on the Friday afternoon. Trade stands and a show and tell on the Saturday and a slightly off topic Fossil Hunt, run by the Dinosaur Farm Museum on Sunday afternoon.

Thanks are due to the following for kindly donating raffle prizes:

Telescope by Opticron/Vixen, Telescope Planet, Astronomia, Widescreen Centre, John Clark Astronomy, Astronomy Now Magazine, Astroparts, Springer Books, BCF/Meade, David Hinds/Celestron and Orion Optics.

Thanks are also due to the organisers, Stephen Griffiths and Bill Johnston, to Glynn Salmon and Barry Bates for opening up their own observatories for people to visit, and to Brian Curd, Sue Curd, Tony Williams, Brian Bond and Faith Jordan for their help over the event.

For more information about the IOW Star Party, see

[www.iowstarparty.org](http://www.iowstarparty.org) or

email [bookings@iowstarparty.org](mailto:bookings@iowstarparty.org)

Next year's event will take place from

**3rd - 7th March 2011**

### Links:

[www.dinosaur-farm.co.uk](http://www.dinosaur-farm.co.uk)

[www.wightastronomy.org](http://www.wightastronomy.org)

[www.brighstone-holidays.co.uk](http://www.brighstone-holidays.co.uk)

[www.britastro.org/dark-skies/busy.html](http://www.britastro.org/dark-skies/busy.html)

## Garlic Festival

Members of VAS have helped with marshalling at the annual **IOW Garlic Festival** for quite a few years now. The event is one of our largest fund raising opportunities as we are paid for our efforts.

This year's Festival is on the weekend of the **14th and 15th August**

and Richard Flux is keen to hear from members who can help at any time over the weekend.

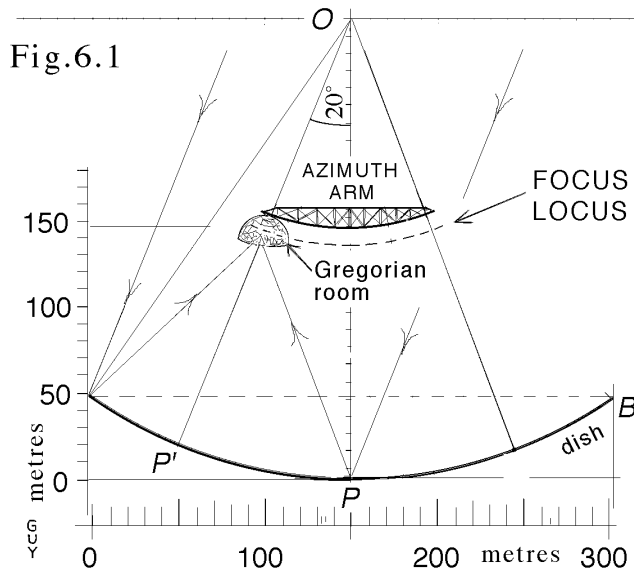
Please contact Richard at [treasurer@wightastronomy.org](mailto:treasurer@wightastronomy.org)

## CQ ETI CQ ETI

**Part 6 - More about Arecibo**

Once you start studying the Arecibo telescope, it's hard to tear yourself away - the good news is - we don't have to. It was the realization of the 'big dream' of Professor William E. Gordon, electrical engineer and radar specialist, who later, recalling all the skepticism prior to building, said "We were too young to know that we couldn't do it." He recently died aged 92. The telescope, which opened in November 1963, has attracted Hollywood film producers and movie stars. But here's more on the technical side.

**The 'Gregorian Puzzle':** Part 5 (April NZ p6-7) mentioned that the receiving aerials run on a *convex* bow underneath the 'azimuth arm', Fig.6.1, so the telescope looks more Cassegrainian than Gregorian. However attention must be given to 'steering' the dish and to the pod-like aerial, the 'Gregorian room' or 'dome', not discussed in Part 5. This aerial, installed in 1997, uses secondary and tertiary reflectors to correct for spherical aberration. This aerial has extended the operating frequency up to 10GHz, enabling molecules in addition to hydrogen, to be studied in space.



The 'azimuth arm', 100m long, to scale in Fig.6.1. has ends at 20 degrees from the vertical  $OP$ , measured at the centre of curvature  $O$ . When the dish is 'steered' 20 degrees off vertical, with the Gregorian dome at the end of the bow, point  $P$  becomes the new point at 'the bottom of the dish'. If the centre of curvature of the bow coincides with  $O$ , then an aerial running along the curved track maintains a constant distance from the point  $P$  as this point wanders around the dish according to the elevation and azimuth settings.

The 'focus locus' is marked at half the radius of curvature. For a Gregorian telescope, the secondary mirror would be concave, mounted above this focus, below the bow. The 'radio wave optics' take place within the Gregorian room - very complicated inside - see various pictures on the website references. This room, with a rotary floor, contains cryogenically cooled receivers as well as the one-megawatt radar room. 28 electrical motors control this moving structure to 1mm precision. With 140 staff, 30 of them astronomers, this is a modern technological and scientific paradise. You can spend several hours doing simple ray tracing using a protractor on a flat screen to construct rays obeying the laws of reflection, figuring out how the system, drawn to scale, works.

**Midday Sun:** So what happens when the overhead midday Sun shines into the dish? At Mont Louis in the French Pyrenees, a mere 40-foot diameter reflector concentrates the Sun's rays into a furnace creating temperatures high enough to melt zirconia. But the Arecibo dish, 1000 feet across, is constructed of 40,000 doubly curved aluminium panels, each 6 x 3 feet. What prevents the platform at the focus of this dish from catching fire? The answer must be the surface finish of the panels - the dish is very shiny for radio waves but light, of much shorter wavelength, is scattered.

**Achievements:** Since opening in 1963 this telescope, alongside work on SETI, has provided data on:-

- properties of Earth's atmosphere and ionosphere
- rate of rotation of Mercury (1964)
- helped find suitable Apollo lunar landing sites
- explored the topology of Venus by radar
- asteroid and comet ranges accurate within 50ft
- the first extrasolar planetary system, (1991): three planets orbiting pulsar B 1257+12
- struggled to detect a signal from the Mars Polar Lander = the most ultimate search
- galaxies, hydrogen clouds in the Virgo cluster; other molecular clouds and their velocities; star formation and evolution; the interstellar medium; structure hidden behind the Milky Way and, of course, more pulsars
- evolution of elemental abundance over cosmic time
- discovery of a binary pulsar in 1974, confirmed Einstein's gravitation theory, and a Nobel prize for Joseph Taylor and Russell Hulse in 1993.

**The ALFA project:** Using a receiver installed in 2004, with a central horn surrounded by six horns, Arecibo has a 5x faster mapping speed, and 10x better resolution of the molecular hydrogen line, than other radio telescopes. This only applies, of course, to the 40 portion of sky overhead, covered by this telescope, see Fig.6.2. The telescope looks out from Earth with a declination ranging from  $-1^{\circ} 24'$  (just below the equatorial plane) up to  $+38^{\circ}$ . Several signals at once are received and sent to different parallel projects, This 'commensal observing' increases scientific returns per hour of telescope time. 14 IF channels (like the intermediate frequencies in a 'superhet') travel from the Gregorian Dome to the Operations Building. Each horn covers  $3.8 \times 3.3$  arcmin of sky, tuning into signals between 1225-1525MHz. A few minutes of Arecibo time can equal hours on other telescopes.

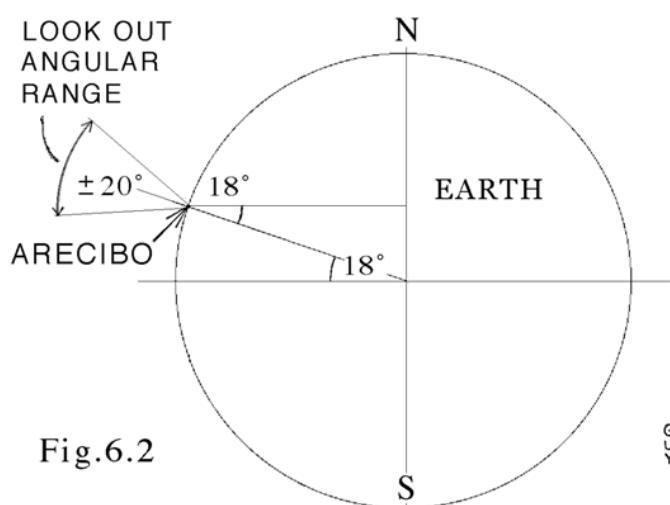


Fig.6.2

**SETI:** The evidence is that SETI is a long term non-governmental project benefiting from continuous public interest, subscription and support. Witness the 5 million people in 226 countries volunteering the use of their PC computing power, so far contributing 2 million years of computing time to the project. SETI continues to stimulate much discussion and with astrobiology, has become a part of the scientific educational curriculum in the USA. Another aspect making the SETI project unique in the modern world (which emphasizes 'targets and timetables') - is there is no target date for ultimate success! How can there be? SETI transcends the psychology of the rush of the modern world - and people remain not just interested, but fascinated!

SETI@home launched in 1999, is a traditional type of search for a narrow band signal, close to the hydrogen emission line, covering 1418.75 to 1421.25MHz. Data is processed into 0.07Hz wide segments and home-computers test for possible reconstruction of an original signal by compensating for unknown Doppler shift rates. If an ETI signal is outside this 2.5MHz bandwidth, then it may get picked up in the 300MHz wide project of SERENDIP V, updated from previous such work. This covers a broader spectrum but is less sensitive than SETI@home.

Alongside investigations into natural phenomena, SETI makes a good companion. For example, ETI may make use of a different type of signal using high power pulses. The ASTROPULSE project is the search for pulses that may come not only from ETI but also phenomena such as the decay of black holes. Using broadband pulses overcomes the Doppler shift difficulties, but the problem is the Fourier components of pulses travel at different speeds through space giving 'dispersion'. This requires considerable use of home computers again, to 'de-disperse' the signals to see if pulses can be reconstructed. ASTROPULSE may detect pulsars rotating at more than 1kHz - it's the first search - or other hitherto unknown phenomena.

SETI is "helping to bring people from all walks of life together and to trivialize the differences between us" - that's the view of Jill Tartar, Director of Research at the SETI Institute (seen on 'Life on other planets' *Sky at Night*, Patrick Moore, 9 March 2010, BBC4). A poignant reminder of this fact is, no matter how far or how much you have spent to travel to Puerto Rico to visit this unique telescope, the Visitor Centre charges you 6 dollars for your trouble. That's because, compared to the distances over which signals from ETI may one day be received, everybody on this planet is local to Arecibo.

#### References:

- [http://www.spacedaily.com/reports/The\\_Father\\_Of\\_Arecibo\\_Dies\\_at\\_92](http://www.spacedaily.com/reports/The_Father_Of_Arecibo_Dies_at_92)
- [http://www.space.com/scienceastronomy/astronomy/arecibo\\_profile\\_000508.html](http://www.space.com/scienceastronomy/astronomy/arecibo_profile_000508.html)
- <http://www.naic.edu> (excellent photographs plus newsletter.)
- <http://www.howstuffworks.com/seti.htm>
- [http://www.planetary.org/programs/projects/setiathome/setiathome\\_2009056.html](http://www.planetary.org/programs/projects/setiathome/setiathome_2009056.html)
- The Arecibo Observatory is operated by Cornell University in cooperation with the National Science Foundation.

**Question** - So how come computers routinely generate patterns of letters that can only be read by humans?

# ARECIBO

Dr. Guy Moore

## Meteoroid Impacts on the Moon

**Graham Bryant - Hampshire AS**

**Lecture Notes - 26 March 2010**

Barry Bates opened the meeting, urgently calling on members to dig out any of their material relating to the VAS for the society's archives especially as the number of original members is now quite few. Upon introducing the speaker, Graham said that they, too, are busy working on the archives of their fifty year-old society.

Graham hinted at another reason for cooperation - meteorites colliding into the Moon. The particular problem is 'false positives'. The evidence requires simultaneous recordings of lunar flashes observed from different locations, using accurate timing and equipment. A single observation of a flash could be caused by a meteor seen head-on, in line with the Moon, or a glinting satellite reflection passing in front. It's an important subject because both NASA and the Chinese wish to evaluate how hostile the Moon would be for lunar visits lasting months.

Graham divided the sky into boxes of side 40 miles, as a double stack. Meteorites streaking into the upper atmosphere become visible at 80 miles height. From Clanfield in Hampshire, the boxes reach as far as the skies over Dundee and the middle of France. Low elevations, 11 degrees or so, favour seeing meteorites a kilogram in size, turning into fireballs, sometimes 'captured' by CCTV security cameras. Pictures of the Leonid meteor shower from the MSX satellite and from high flying aircraft provided broad aerial views.

**History:** Just one old reliable record exists. On the 18 June 1178 (Julian Calendar), one hour after sunset, the upper horn of the crescent moon was briefly transformed into a flaming torch. This may have been caused by a head-on meteorite and local atmospheric distortion in line with the Moon.

On 19 Oct. 1945, selenographer F.H.Thornton, saw a flash on the dark side of the Moon, another two in 1948, and one in 1955.

In 1953, Dr.Leon Stuart photographed a flash lasting "8 to 10s". A fresh crater might correlate with the flash, but the jury is still out as the flash appears too long compared to those normally seen for meteorite impacts today.

On 10 Dec. 1972, lunar module pilot and geologist, Harrison Schmitt, upon seeing a flash on the Moon, alerted his colleagues to watch the seismometers.

**Well-established phenomenon:** Observers see about 2 to 3 flashes per month. Each lasts a fraction of a second,

and is caused by the heat generated when a meteorite of average speed 40km/s, is brought to a sudden halt.

**Puppis meteors:** Flashes tally in position and frequency on the Moon's dark side with the Perseids striking the Moon at the top left. Leonids collide on the right-hand side and we can see the Puppis meteors of the Southern hemisphere, peppering the Moon from underneath. Maps of high probability collision zones can be downloaded from NASA. Collision chances increase towards the lunar edges because bigger land areas are squashed into smaller observation angles. Estimates of the meteor masses giving a Magnitude 3 flash vary from 10g to 3kg, and a diameter of 20cm. A 4cm meteorite would give a Magnitude 7 flash. A 5kg meteorite makes a crater 9m across, but simulations at these speeds can't be done on Earth and artificial crashes into the Moon have been used.

**Equipment:** Photos normally include a piece of the visible Moon for reference purposes. You only need a 14 or an 8-inch telescope. CCD images, good for sequences of still shots, aren't adequate to establish impact times to within a fraction of a second. Shutter speeds of 1/30th sec are needed, plus GPS timing and plenty of computer memory to store video. Image intensifiers are available.

**Scope for amateurs:** New Moon to the first quarter, and the last quarter, early evening, are favourable for observing. When everything is set up, "it's like watching paint dry", but automated systems can be used. Perhaps amateurs can perfect the systems. The activity is hungry on telescope time, but is cheap and the NASA website says they are very interested in amateur observations. Hampshire AS and VAS are well placed to correlate data.

**The discussion:** included flashes seen by the Apollo astronauts, not much mentioned publicly at the time lest their sanity be questioned, caused by cosmic rays passing through their eyes. At that distance, the Earth's magnetic field gives no protection. Another question concerned the wearing of the Moon's surface - a rain of fine dust, plus the heating and cooling cycle cause sharp-edged features to wear smooth. Apollo lunar seismology detectors no longer function, but the passive reflectors remain. Peter Burgess said the prisms are beginning to deteriorate.

**Acknowledgements** were made to: Dr.Mike McCabe, University of Portsmouth, and Andrew Barrow, Librarian. Dr Karen White. Bill Clarke of MEO, Marshall Spaceflight Centre.

**Puzzle corner:** Using the data from this excellent talk (about 30 visible strikes per year) estimate how many hours per night, F.H.Thornton spent on average watching the Moon, given that he saw 4 strikes between 1945 and 1955. Answers to the Editor please- perhaps we'll see them in print.

**Reporter - Dr.Guy Moore**



## Star Party 2010 - Some Pictures



*Stephen Green shows Andy Stanford Clark his solar scope  
Credit SJ Griffiths*



*Peter Woolliams - Credit Lucy Rogers*



*Andy Lee - Credit Richie Jarvis*



*Group Shot - Credit SJ Griffiths*



*Owen Brazell and Faith Jordan check out large telescope  
Credit SJ Griffiths*



*John Axtell - Credit Andy Lee*

*HiRes versions of these pictures are available on request.*

## THE BACK PAGE

LINKS, COMMENTS AND OBSERVATIONS

### News and Events

#### **Membership Secretary and New Zenith Printer needed**

As mentioned earlier in this issue, VAS needs members to volunteer for several Committee positions this year, in addition we also need replacements for the Membership Secretary (currently Tony Plucknett) and the NZ Printer (currently Bill Johnston). Both Tony and Bill have decided to take well earned rests from the tasks.

#### **Membership Secretary**

This entails keeping computerized records for each member and ensuring that subscriptions are collected. All details are kept in a custom Excel spreadsheet so anyone taking on the task needs to be familiar with PCs, Excel and have an internet connection for email etc. *Tony is happy to explain what goes on to anyone interested in taking on the work.*

#### **New Zenith Printer and Emailer**

Whilst many members have now chosen to receive their copy of NZ by email, each month we still provide print copies for those who prefer them or who don't have internet facilities. NZ is provided to the printer each month by email as a pdf file, this file is then sent by email to those on the "electronic copy" list and enough copies are printed to cover those on the "print" list and a few spares for the monthly meeting. Distribution of the printed copies is done by others. Again, this post requires computer literacy. *Bill is happy to explain what goes on to anyone interested in taking on the work.*

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***Both these positions are essential to the survival of VAS and must be filled as soon as possible.***

***We really do need help this year!***

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***To help reduce costs, please consider changing your NZ subscription to an email one.***

***Each printed copy costs us at least £1 to produce & deliver***

### Observatory

For your own safety, when visiting the VAS observatory, please bring a torch. Also, please make sure you close and lock the car park gate if you are the last to leave - if you need the combination to the lock, please contact a member of the committee.

### Articles Needed

New Zenith welcomes letters, articles or pictures related to all aspects of astronomy. Contributions to the Editor at the email or postal address on the front page.

***"It's too early to make jokes about the Icelandic ash cloud... we need to let the dust settle first"***

### Quotations

*"A man gazing at the stars is proverbially at the mercy of the puddles in the road"*

*Alexander Smith*

*"The production of useful work is strictly limited by the laws of thermodynamics.*

*The production of useless work seems to be unlimited"*

*Donald E. Simanek (1936- )  
US physicist, educator, humorist.*

*"Newton, forgive me"*

*Albert Einstein*

# VAS Officers and Committee Nominations 2010/11

For those wishing to stand for election at the AGM of the Society to be held on Friday 27th August 2009 at 7.00pm.

## *Name and Address of Nominee:*

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## **Standing for**

- Chairman .....
- Treasurer .....
- Observatory Director .....
- Membership Secretary .....
- New Zenith Printer .....
- Program Organiser .....
- Observatory Outreach Co-ordinator .....
- Committee .....

Proposed by: .....

Seconded by: .....

Signature of Nominee:.....

## **Notes**

1. No person can be elected to more than one position.
2. Only adult fully paid-up members may stand for election (or propose or second).
3. All completed nomination forms to be received by the Secretary in writing at least 7 days before the AGM. The Committee consists of not less than six members.