



Society News

From the Chairman

As Orion has started to rise in the early evening, it must be the time of year to find the woolly hat and start to enjoy the wonders of the winter sky. But for those who would rather not venture out in the cold, dark evenings, there is a twilight astronomical event that may be worth watching out for. On 1st December, Venus passes behind the moon – known as an occultation. Just before 3:48pm GMT, when the planet is only 13 degrees high (just west of due south), it will pass behind the dark limb of the crescent moon. As the Sun will have only just set, please take extreme care and NEVER POINT BINOCULARS OR A TELESCOPE NEAR TO THE SUN. The planet emerges at 5:17 pm, when Jupiter will only be a couple of degrees away to the north.

For an extra bit of Christmas sparkle, watch out for the Ursid meteor shower, which peaks on 22-23rd December. The shooting stars will appear to originate from 5 degrees west of the base of the sauceman in Ursa Minor. (This spot is known as the radiant). Who needs fireworks?

VAS Website: www.vectis-astro.org.uk

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

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

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

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Finally, I would like to say a special thank you to Trevor Tuckwell, who for many years has done a grand job of keeping the observatory looking great. Trevor has now stepped down from these duties, and so, on behalf of the society, I would like to say to Trevor “Many thanks for all your hard work. It has been greatly appreciated.”

Clear Skies, Happy Winter Solstice and Merry Perihelion!

Dr Lucy Rogers
Chairman, Vectis Astronomical Society

IYA 2009 - First Event Announced!

To start our celebration of the International Year of Astronomy, we will be holding our first public event from 19.30, Sunday **25th of January** at the car park and petanque pitch of the **Pointer Inn in Newchuch**.

More events are planned across the Island and we look forward to clear skies and plenty of public interest.

Please note: this is not intended as a general member's night and is aimed at interested members of the public.

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Monthly Meeting Calendar 2009

As promised last month, here is the list of speakers for our monthly meetings. Many thanks to Roger Young for this great lineup.

| Date | Subject | Speaker |
|--------|--|---|
| Jan 23 | TBA | Dr. David Whitehouse BBC Science Correspondent |
| Feb 27 | The Magellanic Clouds | Prof. Malcolm Coe Southampton University |
| Mar 27 | TBA | Ian Morrison |
| Apr 24 | Is There Anybody Up There? | Bob Mizon |
| May 22 | TBA | TBA |
| Jun 26 | The Distant Future of the Earth | Dr. Robert Smith Sussex University |
| Jul 24 | Exploring Titan | Dr. Axel Hagermann Open University |
| Aug 28 | Colours in the Sky Oddball Theories | Members' Night |
| Sep 25 | The Search for Novae and Supernovae | Guy Hurst |
| Oct 23 | TBA | TBA |
| Nov 27 | The Radial Velocity Experiment, the Gaia satellite & an historic coincidence | Dr. George Seabroke Open University |

All details correct at time of publication.

Dates for your Diary

Isle of Wight Star Party. Thurs 26th March to Mon 30th March 2009. Expressions of interest to **Stephen Griffiths** (info@iowstarparty.org). More details in NZ soon, or visit www.iowstarparty.org

New Members

A very warm welcome to our 3 new members this month:

- A. Hulbert
- C. Grattage
- M. Grattage

Tony Plucknett

International Year of Astronomy 2009

VAS are planning events throughout 2009 and welcome any suggestions for suitable locations and partnerships with other interested clubs and organisations.

We have a working group tasked with promoting astronomy during 2009 and would appreciate the help of members during the year. If you think you can help with this project in any way, please contact either

Brian Curd - brian@briancurd.com or

Bill Johnston - bill.johnston@onwight.net

For more details of events throughout the UK, full information and other links please visit the IYA UK Website at

<http://www.astronomy2009.co.uk/>

Electricity Costs

I am sure you must have noticed the increase in fuel prices this year - we certainly have at the observatory.

In an extra effort to reduce our fuel bills, can I ask all member's to make sure that all electrical appliances and lights are turned off before you leave the observatory. Any equipment which MUST be left ON at all times is clearly marked.

Island Planetarium @ Fort Victoria

The Island's Telescope Professionals

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This Month's Night Sky

Moon Phases

| Dec 2008 | New | 1st Qtr | Full | Last Qtr |
|---|------|---------|------|----------|
| | 27th | 5th | 12th | 19th |
| Jan 2009 | New | 1st Qtr | Full | Last Qtr |
| | 26th | 4th | 11th | 18th |
| All times are in BST - For GMT subtract one hour. | | | | |

Shortest day is at the winter solstice on the 21st when, just after midnight, the Sun halts its southerly motion in declination in Sagittarius. In Dec the Moon is both at its closest and furthest away from us for 2008. On the 13th it is 356,595km away and on the 27th it is 406,580km away.

Planets

MERCURY Makes a rather poor appearance in the evening sky at the end of Dec. On the 31st it is a little over 1° below Jupiter low in the evening just after sunset.

VENUS is still pulling away from the Sun and is a spectacular object evening sky. Visible even before sunset just west of south Venus and Jupiter make a nice pairing with the two planets approaching a mutual conjunction on the 1st when they will lie 2° apart against the background of Sagittarius and Capricornus. Also on the 1st the 13% sunlit Moon occults Venus in a daylight sky. Owners of telescopes can witness the event which starts at 15:45 but extreme caution is advised as the Sun is above the horizon and scanning the sky runs the risk of catching it in the eyepiece, something which is certainly advised against. The occultation ends with Venus reappearing from behind the Moon's bright limb at around 17:16 - well after the Sun has set. Higher in the sky and easier to see than Jupiter and Mercury is a nice pairing with the Moon also on the 31st.

MARS is at solar conjunction on the 5th and is therefore not visible.

JUPITER lies 2° north of Venus on the 1st. As the sky darkens the Moon/Venus/Jupiter trio will make a nice scene when they approach a tree lined horizon. Venus is by far the brighter of the two planets as Jupiter moves further away from the Earth.

SATURN is recovering from Sept's solar conjunction and rises before midnight at the middle of the month. Saturn's apparent diameter slowly starts to increase from now on until next year's opposition. At the end of the month it will appear to be 18.5 arcseconds across and will sport a magnitude of +1.

URANUS is poorly placed as is **NEPTUNE**.

Meteors

Geminids are favourable on the 12th/13th with rates of around 100/hour under ideal conditions. Don't expect anything like these rates under light-polluted skies. This year the shower is unfavourable due to the Moon being at Full phase.

Ursids, a widely neglected shower due to the date of maximum, reach their peak on the 24th. Favourable this year as the Moon doesn't rise until 07:13 on Christmas morning. So, if you've nothing better to do that night have a go at observing the Ursids for a couple of hours!

Occultations

| | | |
|------|-------|------------------------------------|
| 1st | 15:45 | Daylight disappearance of Venus |
| 1st | 17:16 | Reappearance of Venus |
| 6th | 21:43 | Disappearance of lambda Piscium |
| 6th | 22:30 | Reappearance of lambda Piscium |
| 13th | 21:05 | Disappearance of epsilon Geminorum |
| 13th | 22:06 | Reappearance of epsilon Geminorum |

Deep Sky

M103 Open Cluster R.A. 1h 34m Dec 60° 42' mag 7.0 - A celestial Christmas tree, this young and colourful cluster with many bright blue and a number of orange and yellow stars gives the effect of Christmas tree lights with the brightest forming the star on top of the tree. M103 is the last entry of Messier's catalogue, the remaining objects were added after his death based on his unpublished work.

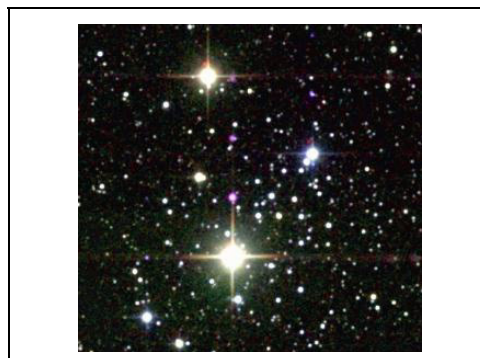
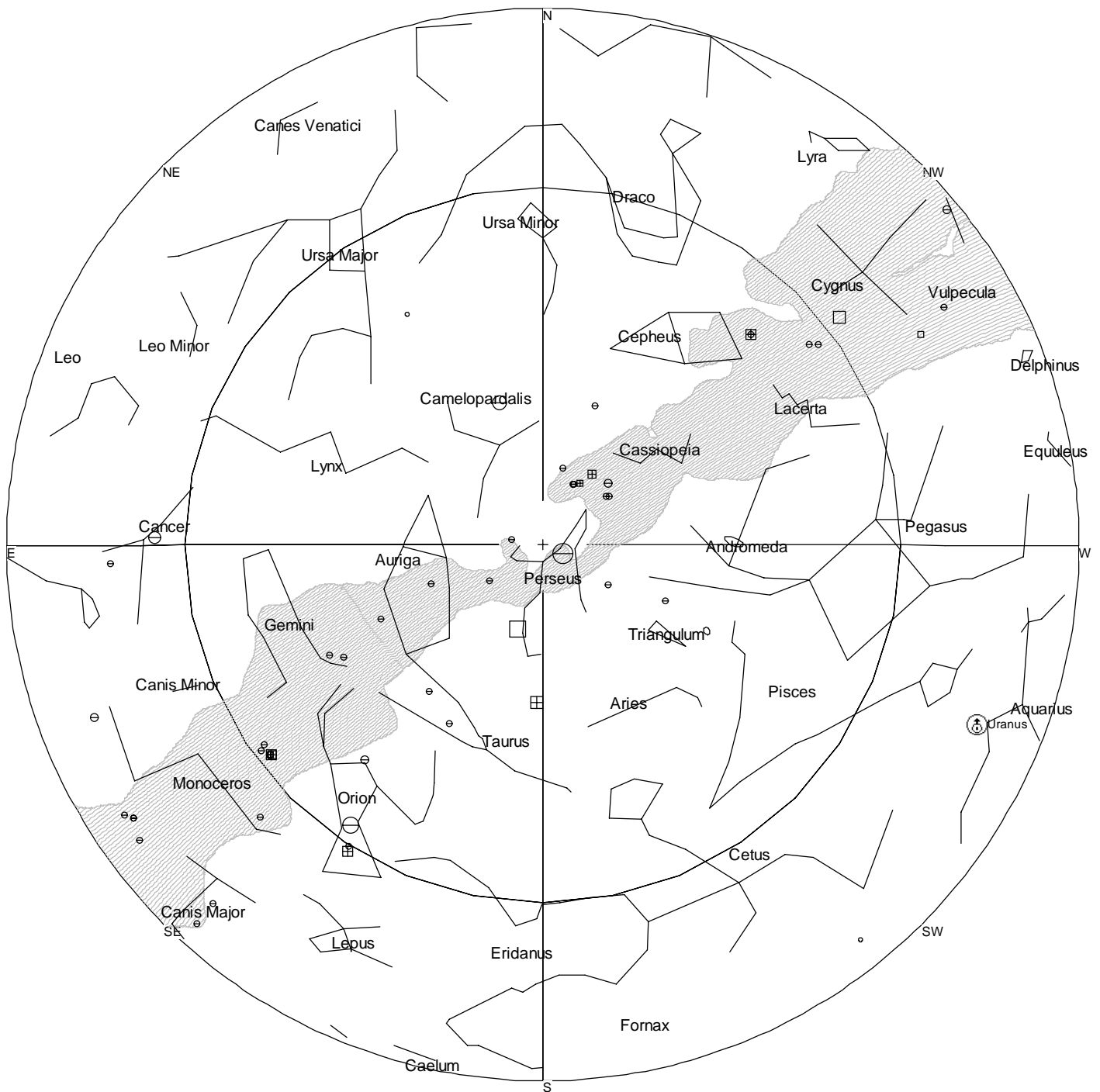
NGC1662 Open Cluster R.A. 4h 49m Dec 10° 54' mag 6.4 - About 2° towards the Hyades from the northern tip of Orion's shield is this large but rather sparse group of stars. About half way along the lower edge is a small diamond of 10th mag stars that along with an 11th mag outsider form a group resembling a mini, slightly squashed, Delphinus.

NGC1647 Open Cluster R.A. 4h 46m Dec 19° 7' - Scanning with a pair of 10x50 binoculars from Aldebaran towards Elnath (often shown shared with Auriga), just as Aldebaran is leaving the field of view, in the centre should be a fuzzy triangular patch of stars about the same size as the full moon - this is NGC1647. Here, increased aperture is more important than magnification as it shows and resolves more cluster members whereas magnification lessens the impact of the overall cluster.

NGC1746 Open Cluster R.A. 5h 3m Dec 23° 45' - Continuing from Aldebaran to Elnath, just past the halfway mark is NGC1746 a very large (1° dia) very sparse cluster. There are a number star chains of various colours, and in the centre, three of these make up what looks like a three bladed propeller that seems rather the worse for wear.

Peter Burgess

December's Sky



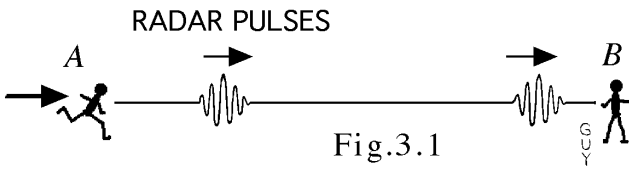
M103

M 103 (NGC 581, Melotte 8, Collinder 14, Raab 4, OCL 326) is an open cluster in Cassiopeia, located within 1° of Delta Cas. An intermediately rich group, M 103 contains between 40 and 50 stars within a 6' circle. The brightest star is the 7th magnitude multiple star system HD 9311 (Struve 131). The stars in this cluster lie about 9000 light years away from us, which is about 10% of the size of the Milky Way's disk.

Perhaps the most interesting thing about this cluster is the appearance of curving star chains radiating outward from the center. The result can be a 3-dimensional illusion of a concave appearance. To me this cluster looks very much like a spider's web, and I think of it as the "Spider's Web" cluster. Also look for a prominent 10th magnitude red giant star on the southeast edge.

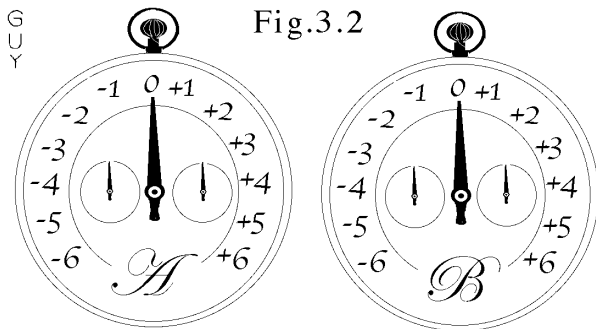
http://www.skyhound.com/sh/archive/nov/M_103.html

Let's Explore Special Relativity (part 3)



1. **Funny times, clocks and watches:** Here are our little friends again, observers A and B in Fig.3.1. This time they carry unusual silver stop watches, the sort that would fetch a good price at auction. Einstein's watch itself recently went for sale, a plain looking watch with a square dial. It's a bit odd, a watch with a square face - by now you might think that Swiss engineers would make the hands grow longer when they point towards the corners.

Our identical watches, labelled A and B, Fig.3.2, are plain circular watches with ZERO at the top. The hands rotate clockwise as normal, but when set going they start at -2000 seconds (negative) and count down, so time ticks forwards, -1999, -1998, -1997,.... -3, -2, -1, 0, +1, +2, +3, +4, +5,....etc. Perhaps early rocket engineers had watches like this.

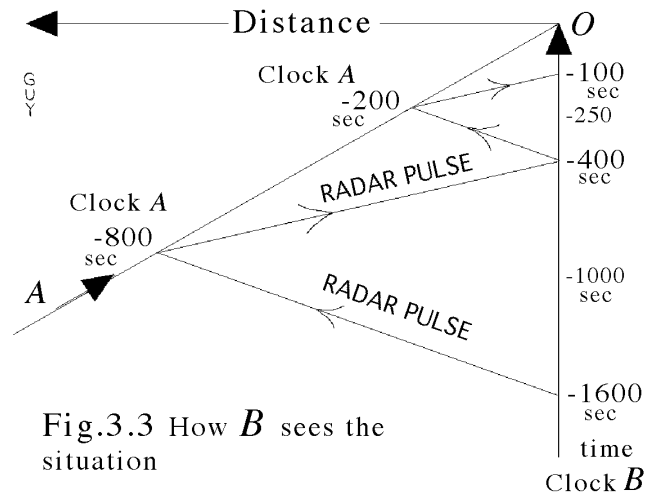


As an aside, I've always had a problem with p.m. (post meridian) and a.m. (ante-meridian). I would have thought that 3 a.m. would be 3 hours before midday, or 9 o'clock in the morning. I wish historians would take a leaf out of the books of shooting-star watchers, who specify both dates straddling the night, and instead of historians saying "the winter of 42" they should say "the winter of 42-43" or "41-42".... now back to relativity...

2. **Clock approaching, runs fast or slow?** In Parts 1 and 2, a clock receding from the observer was found to run slower than the clock of the observer. What happens if the clock approaches? I will use the same speed $v=0.6c$ or 0.6 of the speed of light, as in the examples of Parts 1 and 2, but here, in Fig.3.1, observer A races towards observer B (that's us) at $0.6c$. It makes sense that if A fires radar pulses at us spaced by 100 seconds on clock A, we receive them spaced by 50 seconds on clock B. That's because when racing away at this speed, the pulse spacing doubles (see parts 1 and 2) so now, when approaching the pulse spacing halves, giving a

blueshift. This causes frequencies to double and wavelengths to halve (so $\lambda/\lambda_0=0.5$). Using the formula for redshift, see part 2, gives $z=0.5 - 1 = -0.5$. Blueshift registers as a negative redshift.

3. **Another thought experiment:** As A races towards B (that's us), the motion causes clocks A and B to lose synchrony. We don't know how to set the watches up when A starts to race towards B, but after trial and error tests, we can get things sorted so that when A meets B, both watches tally just as the hand of each clock reaches 0 seconds. Now we can go over various events that happen in this experiment, illustrated in Fig.3.3.



4. **Another 'Bondi diagram':** Time is progressing forwards as usual. When clock B (that's us) says -1600 seconds, I send a radar pulse towards A who receives it at -800 seconds on clock A. A reflects the pulse back using a copper sheet and we receive the pulse at -400 seconds on our clock B. (Halve the time for each transit). I reflect the pulse back to A who receives it...guess when...at -200 seconds on clock A, reflecting it back to me, and we get it...guess when...at -100 seconds on clock B. When our clock B says 0 seconds, there's a flash and a bang, indicating that the rocket assisted skateboarder has just passed us by; I caught a glimpse of his watch - it said 0 seconds agreeing with our's at that instant, and we're left rolling on the ground from the shock wave.

5. **Now the calculations:** I sent a pulse at -1600 seconds, received it back at -400 seconds. The pulse travelled at the speed of light for 1200 seconds, to A and back. The distance each way being equal, then the radar range when the pulse reaches A is, according to us, $0.5 \times 1200 \times c = 600c$, since range = speed x time. According to my reckoning using clock B, the pulse reached A half-way between -1600 and -400 seconds = -1000 seconds. So, according to our clock B, it takes 1000 seconds for A to travel the distance equal to the radar range and nearly collide with us at time = 0.

Hence the speed v of A is range / time = $600c/1000 = 0.6c$, which means that the diagram in Fig.3.3 tallies with the speed specified in section 2. So I hope that's okay for you!

6. **Double check:** When clock B says -400 seconds, the pulse sets out to encounter a reflection from A and back it comes at -100 seconds. The radar pulse has travelled for 300 seconds there and back, so the radar range is $150c$. According to my reckoning using clock B , the pulse reached A when our clock B said half way between -400 and -100 = -250 seconds. At that time, I know that A 's radar range is $150c$ and it takes 250 seconds before A comes flying past us at time 0, so A 's speed is range / time = $150c/250 = 3c/5 = 0.6c$, so the speed tallies with before, like it should.
7. **Now compare the clocks A and B :** don't forget we mustn't switch identities, we are observer B . When clock B says -1000 seconds, the pulse reaches A but for that event, clock A says -800 seconds. This means, for us, there's 1000 seconds to go before we nearly collide at time 0. But for A , there's only 800 seconds to go before collision. This means, from our point of view, the moving clock has a hand rotating more slowly than the hand of our clock, their seconds are longer than ours and the time dilation is 0.8, just like it was in part 2 when the clock was receding!
8. **More double checking:** When clock B says -250 seconds, the pulse has just arrived at A , but their clock definitely says -200 seconds for that event. The ratio of 200 to 250 is $4/5$ or 0.8, so the approaching clock runs slow by the same factor, in agreement with above.
9. **Some conclusions so far:** A luminous clock with white figures and hands either receding or approaching at 0.6 of the speed of light, runs slow by a factor of 0.8 in both cases, so only 8 seconds pass on the moving clock compared to 10 on our clock. In the former case, with the clock receding, the clock is redshifted so it appears red. In the latter case, with the clock approaching, classical Doppler shift wins over time dilation, so the clock is blueshifted and appears blue. Well done reaching this far!

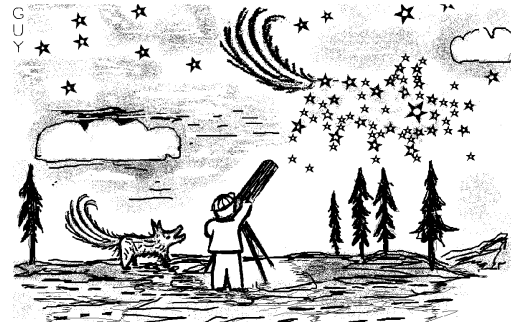
Questions are welcome, via the editor.

Dr. Guy Moore

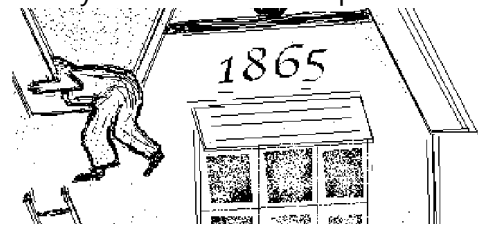


... A Christmas Quiz

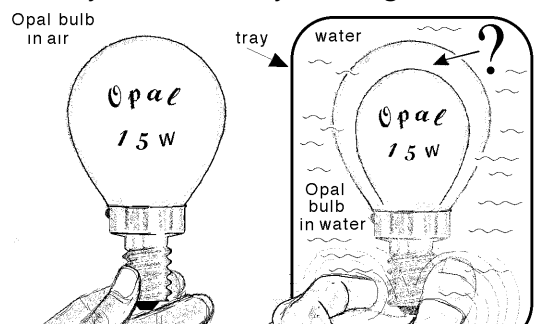
1. Santa Claus drops a sack of vegetables from his sleigh travelling at $0.6c$, so $z=1$. What do the vegetables appear to be as they vanish westerly?
2. Who, what and when is illustrated below, and what is the name of the dog?



3. Cycling along the track from Sandown to a VAS meeting in Newport, I see a sign, "STOP, LOOK, LISTEN" telling us of the yellowhammers' song. Later I see another sign "STOP, LOOK, LISTEN!" picturing broken hazelnuts telling us about red squirrels. Then I see another sign "STOP, LOOK, LISTEN!" picturing a red admiral. Puzzling over the sound made by butterflies, the answer came in a flash - I think I rumbled it - have you?
4. How many boats of the Shanklin yacht club featured in the NZ recently?
5. What is the significance of the year seen in Fig.2 p6 NZ July 2008? - see zoom picture.



6. A opal (not pearl) light bulb is immersed in water in a tray - see sketch. Viewed from above, the glass wall thickness appears to increase enormously, whereas the bulb appears the same size, why? (Note: Safety warning in the solution).



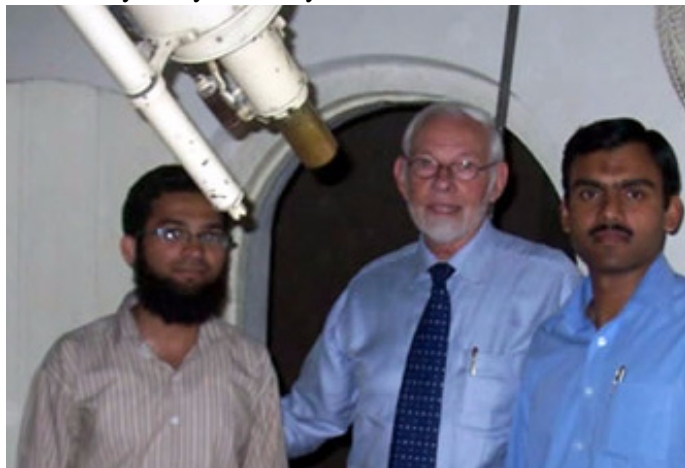
7. Who discovered Mars beneath water?

Answers on page 9

The Grubb Telescope

As one with a life time interest in astronomy and having lived in Lahore for so many years I have longed to see the telescope in the Crust Road Observatory; until now I have not had the opportunity even though I arrived in Lahore in 1962 and have tried to see it several times over the years. Crust Road is to the south of the old walled city and east to west Victorian era Mall Road, clearly sited away from pollution on the highest ground in the area.

With my remaining time in Pakistan now limited to days, while down in the city area on Wednesday 16th October I decided I must visit the Observatory on the way back to the office. The Observatory is situated in the Old University cricket grounds. It is partly obscured now-a-days due to the construction of new sports buildings to the west and un-checked growth of trees. With some problem I got through the gates and with the Chowkidar's help found the Keeper of the Observatory, a Mr. Mohd Naeem. He proved most helpful producing within a few minutes a marvellous aluminium folding ladder from somewhere to climb up and un-padlock the 10ft high access door to the observatory dome. He beckoned me to climb and join him. It was very dusty and dirty!



What presented itself was the amazing sight of an old 1914 Grubb 8 or 9" refractory telescope complete with a most beautifully engineered equatorial mount. This was the largest refractory telescope in the Indian sub-continent at one time and it is still the largest in Pakistan today. I was forbidden to get too close or photograph the observatory and its telescope. Permission first!

Further contact with the University Vice Chancellor and Professor Dr Mohd Ali Head of Dept. of Space Science led to an October 31st 6.30 p.m. revisit with senior lecturer Mr. Asim Daud who was actually in control of the Observatory and responsible for its use.

The night of the 31st Oct 2008 I will remember for a long time. It was 6.25 p.m. just getting dark as I drove with lights on up to the gates which this time opened like magic with the keeper and a smiling security man obviously expecting me. The Observatory door was open, the lights

on, the aluminium dome opened up, all was ready for my visit with Mr. Asim Daud who arrived a few minutes later with his assistant.



After a good 15 minutes of cordial lively exchange, of learning a little more of the history, the observatory's current use and taking some preliminary photographs of the tower and the now gleaming telescope through the open door from a distance I climbed the ladder. By this time it was quite dark.

The beautifully crafted timber dome, probably teak wood, is covered in aluminium sheeting and while not operated with electric motors is easy to operate. The planet Jupiter beckoned, the only object visible in the Lahore murky sky. Mr. Daud was obviously familiar with the instrument for he quickly had the planet in sight for us all to see with it's four moons lined up specially for us tonight it seemed. The new moon of the 28th might have been visible but not from the observatory as the new sports building closed off all views to the west. The choice of very old well used brass lenses were somewhat limited, perhaps 3 or 4 in number, none having any markings so difficult to assess their power. Despite varying the magnification by changing the lenses I could not see the belt of Jupiter clearly though I have never seen Jupiter so large through a telescope before. The equatorial mount when fixed made tracking the planet easy though all controls were stiff and especially adjusting the lens as it was controlled by physically grasping the scope and moving the tube in and out by hand. The fine Grubb engineered screw adjustments were not present. The vernier scale could be read easily but not through the long side scope and mirror as a part was missing. The ingenious counter balance weights and pulleys in the centre were not

functioning as the cables were broken and no-one had any idea how they worked the instrument. It was fairly basic viewing at best and clearly it is not possible to use this instrument for any serious observing; that could only be done after some major restoration work for which the University needs help.



I hope I can research the history of this lovely old equatorial telescope and its observatory. Thomas Grubb and his son Sir Howard Grubb gained world recognition, building some of the nineteenth century's greatest telescopes, including the 48" Great Melbourne Reflector Telescope and the 27" refractor for the Royal Observatory in Vienna, the largest refractor in the world at that time. Grubb's of Dublin made smaller refracting telescopes of 6 to 10" aperture and clearly one of them was sent to Lahore.

Dr Mohd Ali told me that the University have ordered a 14" Reflector Telescope which will be located in the new university grounds and I understand this should then be followed by a 20" scope. The location for the new telescope is good news for this Crust Road old Grubb telescope needs to be preserved with a lot of expert TLC (Tender Loving Care) to be available and used by the future students. I have taken some 30 photographs including close-ups of the mount and hope to share these with any VAS members who may be interested when I get home.

*Dennis Norris
Lahore, Pakistan*



We urgently require someone to coordinate the Public Outreach that Vectis Astronomical Society undertakes. This involves taking bookings and arranging volunteers to provide tours of the observatory and talks etc. We also need more volunteers for the tours and talks.

If you'd like to be involved, please talk to Lucy Rogers on 01983 731 759 or email chairman@vectis-astro.org.uk.

Slow Computer?

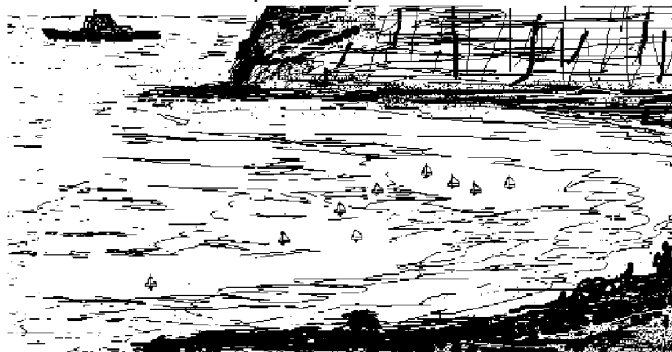
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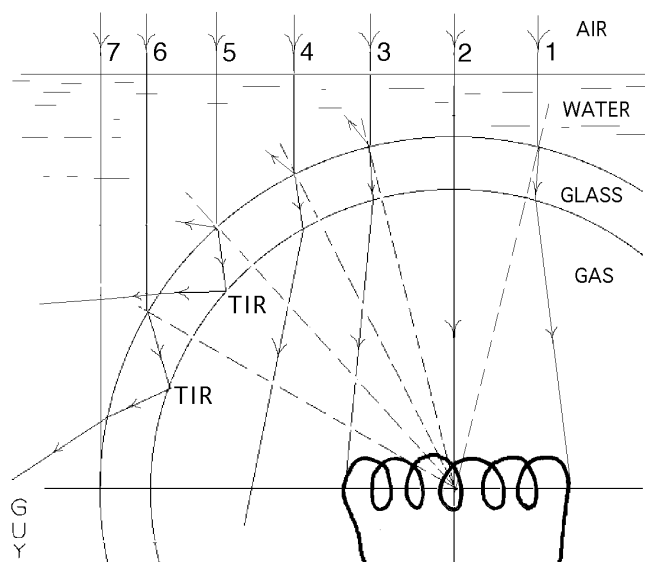
A Christmas Quiz - Answers

1. Raddish.
2. Don Machholz of the San Jose Astronomical Association and his dog "Shadow" discovering their 10th comet at 3.30am, August 27, 2004.
www.astronomy.com/asy/default.aspx?c=a&id=2465
3. Thunder and lightning, of course! Edward Lorentz (see obituary *The Times* 18 April 2008) discovered that chaotic situations simulated by computer can be highly sensitive to the starting parameters. This led to the suggestion that the flapping of the wings of a butterfly can start a storm thousands of miles away. A South American species on the notice would have made this point more obvious.
4. Nine - from the pic. on p8 of the NZ, Nov 2007.



5. In 1865 Rudolf Clausius stated the first and second laws of thermodynamics:
 - (1) "Die Energie der Welt ist konstant." (The energy of the world is constant)
 - (2) "Die Entropie der Welt strebt einem Maximum zu". (The entropy of the world strives to a maximum) However, as explained in my article (April NZ), this principle contains a hidden flaw. Until this flaw is recognized, the next scientific revolution, long overdue, cannot start. The rising entropy principle of the Universe, the modern equivalent of believing in a flat Earth, is decades past its sell-by date. Scientists need the courage of Columbus to leave old thinking behind - new crew apply now - a longer thermodynamic route leads into unexplored exciting new territory! A useful book on the conventional views is *The Four Laws that drive The Universe* Peter Atkins, Oxford University Press 2007, £9.99, a small neat hardback to fit into your Xmas stocking! Don't forget, the Lord Louis library reference section contains the wonderful Paul Edwards *Encyclopedia of Philosophy* Macmillan, London, 1967 - see "entropy" or following Peter Burgess's excellent lecture on the eye and optical illusions, see "perception" for further insights!

6. The diagram shows a quarter section through a clear bulb, with parallel light rays shining downwards. The middle ray (ray 2) reaches the filament without deviation, likewise ray 7 reaches the edge of the bulb tangentially without deviation. Hence the outer surface of the bulb beneath water spans the same distance and so appears the same size as when viewed in air. (Redraw the arrows so light comes from the bulb to the eye) Rays 1 and 3 meet the ends of the filament, so from the outside the filament spans a shorter distance and appears diminished. Ray 5 is a 'critical ray' with total internal reflection (TIR) at the interface between the shiny glass inner surface and the gas in the bulb. From ray 5 to ray 7, the inside of an immersed opal bulb appears to have a mirror finish, but a pearl bulb is too matt on the inside to show the effect. From ray 2 to ray 5, the light is scattered from the inner particulate coated surface, giving a white appearance. The eye is assumed to be sufficiently far above the bulb that the light rays are parallel.



Have fun constructing a large ray diagram using compasses, ruler, protractor, scientific calculator and Snell's law. Use refractive indices: water=1.33; glass=1.5; air, and gas in the bulb, both =1. See, "Novel optical properties of a submerged light bulb" Mark C. James, *American Journal of Physics*, September 2008, 76 856-862, but passing an electric current through the submerged bulb is **not recommended for reasons of safety**. Attach a coloured spot of paper to the end of a paperclip and probe the interesting reflections. **Wipe the bulb thoroughly dry before re-using, don't change a light bulb with wet hands, and make sure the supply is turned off.**

7. ... don't know... can't find it in Paul Edwards' *Encyclopedia*

Dr. Guy Moore

THE BACK PAGE

LINKS, COMMENTS AND OBSERVATIONS

ANOTHER YEAR OVER

Well that's it then, the last 2008 issue of New Zenith! As I'm sure you probably know we take a break over Christmas and there is no January edition - we'll start again with *Volume 17 Issue 1* in February 2009.

Many thanks to all who have contributed to NZ in 2008 - particularly Peter Burgess and Dr Guy Moore.

Thanks also to all those who have contributed and helped the VAS throughout the year, your donations and continued membership make all the difference.

2009 WEB SITE PLANS

James Young has done a great job building and maintaining the current site <http://www.vectis-astro.org.uk/> but is now unable to spare the time to continue with it. James is in his final University year and needs all his spare time for study.

At a recent committee meeting, it was agreed that we would offer James a small gift to thank him for all his hard work in the past and wish him every success in the future.

Over the next few months we will be moving the website to new servers and opening a new domain (www.wightastronomy.org) which will enable us to offer additional services including: *Educational material, Member's Forum, Photo Gallery, weblog and much more.* Please keep an eye on the site for developments.

NEW ZENITH PLANS

The general format of NZ seems to have naturally settled now - that's certainly not to say that everything is perfect though! I'd very much like to see a "Letters" page every month but that is really down to you the members. If there is anything else you'd like to see included, please let me know.

As I am sure you are aware, printing and distributing the New Zenith costs VAS a considerable sum each year. In an effort to further reduce this, I would urge you to consider having your newsletter delivered electronically. The advantages, in addition to the cost savings are:

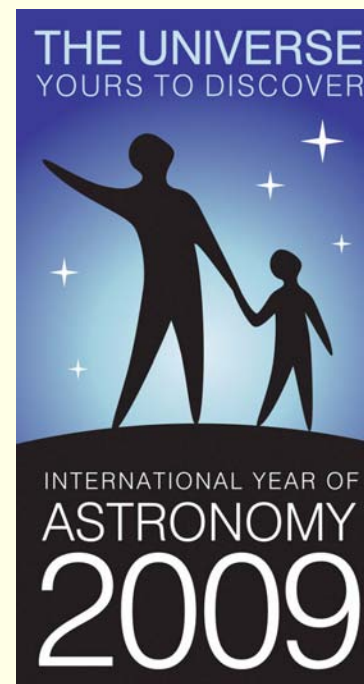
- Full colour version
- Interactive links to associated articles and sites on the WWW
- Higher resolution photographs
- Reducing your carbon footprint

GOING GREEN IN 2009

As well as receiving your NZ electronically you can also help the Island and the VAS by doing your best to "car share" when visiting the observatory and monthly meetings.

See this [website \(http://actonco2.direct.gov.uk/carboncalc/html/\)](http://actonco2.direct.gov.uk/carboncalc/html/) for more information on how you can reduce your carbon footprint today

Brian Curd
NZ Editor



Quotes

"Chances are, when we meet intelligent life forms in outer space, they're going to be descended from predators."

Michio Kaku

"Space isn't remote at all. It's only an hour's drive away if your car could go straight upwards."

Fred Hoyle

Observatory

For your own safety, when visiting the VAS observatory, please remember to bring a torch. Also, please make sure you close the car park gate if you are the last to leave.

Articles Needed

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