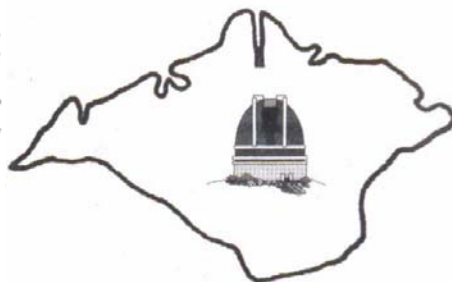


THE NEW ZENITH

THE MONTHLY
MAGAZINE OF THE
VECTIS ASTRONOMICAL
SOCIETY



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*Moon and the Pleiades. A. Plucknett.
19/04/07 Canon 350D 90mm. 4 secs.*



For those readers receiving New Zenith via email, the above photograph is quite beautiful. Try blowing it up to 200% to reveal the detail of the Moon lit by Earthglow. Thanks to Tony Plucknett (VAS Membership Secretary) for sending this in for publication. Any other Members out there with impressive pictures to share with us? Send to the Editor as a bitmap or even JPG format attached to an email, address as at the end of Page 10. A line or two of explanation of what the photo is about, location of shot and equipment used will help make it all that more interesting.

Hopefully, Tony's picture will be acceptable to those of you relying on the snail mail paper version, but no guarantees are implied...

Editor

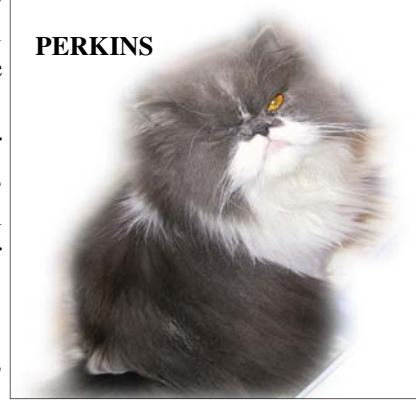
FROM THE EDITOR

Dear Readers

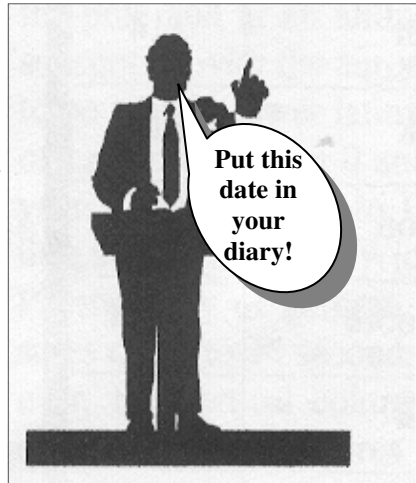
Subscriptions and Elections

Looking around my text box this month, I find myself with more room than I have been used to of late for my piece. Perkins, the Editorial moggie, below, has been looking at me rather worriedly with his one eye in case I try swinging a cat around this new space just to see how big it really is. Let's take it for granted that he would not touch the sides, even with an exuberant aerial orbit of the area. And the reason for this extra room? We are not printing subs reminders in NZ any more. Tony P, your membership secretary, will be hammering on your letterbox in future with demands to 'pay up or else'. This means that there will be no use hiding behind the sofa when his long arm pops a VAS subs final demand into your premises - he will winkle you out.

PERKINS



Speaking of subs, soon it will be AGM time with its customary opportunity for Members to put themselves forward for election onto the Executive Committee. Only fully paid up adult Members can stand for election (or propose or second a proposal), so make sure you are qualified to take part. Inside this month's NZ you will find a nomination form for filling in with either your name or the name of someone you would like to be on the Committee or even stand as an Officer.



Duly completed forms must be returned to John Smith no later than the third Friday in July for consideration. (eZenith subscribers will find the form on Page 11)

There will be lots of activities this year at the Observatory so be sure to keep in touch with events by turning up at the site on Thursday evenings, come rain or shine. There is always the chance to see and try some new equipment, and the Society's 18 inch Dobsonian has just been completely refurbished and fitted out with some splendid new eye pieces that really will amaze you with their clarity.

You have paid for it with your subs so go there and use it.

All the best

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NEXT MONTH'S LECTURE

WHY PLUTO HAD TO GO

Robin Gorman
(Hampshire Astronomical Society)

June 25th
7:30pm
In the Parish Centre
Town Lane
Newport

The Development of the Calendar

Keith Brackenborough
(Eastbourne AS)

Our calendar consists of months of various lengths with an extra day every four years. This ensures that every year the same months correspond with the seasons. However, this was not always the case and what were once spring months slowly shifted into the winter. This is because there are not an exact number of days in a year and the month, based on the lunar cycle, is not an exact fraction of the year either.

Early calendars, such as the Egyptians used, started in the spring denoted by a specific astronomical event such as the first heliacal rising of Sirius.

The first time Sirius was seen in the morning sky just before the Sun rose was taken to be the beginning of the New Year. It was soon found that using 12 lunar months of equal length required additional days to be inserted to make up the difference. The Egyptians used a 365 day year and accepted that the months would slowly shift relative to the seasons.

The early Roman calendar consisted of ten equal months starting in March. Hence the names of the months at the end of our year – September to December – are months seven to ten as denoted by their names. July and August were renamed by Julius Caesar and Augustus Caesar respectively when these emperors reformed the calendar, adding January and February originally at the end of the year. The leap year was introduced by adding an extra day once every four years at the end of the year – i.e. at the end of February. The Julian calendar counted from the founding of Rome in 753BC and continued in use until AD 1582.

The seven day week is described in the Old Testament but it is not clear whether the week is derived from this or if the Bible merely reflects what was common practice. There are seven planets including the Sun and Moon that were known in ancient times and in many languages the days of the week are known by the names of the planets.

Currently we number the years from the birth of Christ although there is some dispute as to exactly when He was born. King Herod died in 4BC so Jesus must have been born before then. Many texts have been written with suggestions as to what sign the Wise Men looked for to herald the birth of Christ. The most probable event was the triple conjunction of Jupiter and Saturn that occurred in 7BC and would have been forecast by the astronomers/astrologers of the time.

Before Christianity, the Romans dated from the founding of

Rome in 753BC but this was not used universally. The numbering of the years and centuries leads to other controversies. The first century ran from 1AD to 100AD, there being no year 0. Hence the beginning of the second century was year 101. Similarly the beginning of the third millennium was the year 2001 and not 2000 when many people celebrated.

The Julian year as devised by Julius Caesar was 11 minutes 15 seconds too long. The English monk, Bede noted in AD 731 that there was a considerable discrepancy in the time of Easter calculated as the first Sunday after the Full Moon following the Spring Equinox. Nothing happened in response to this observation until AD 1266 when Roger Bacon wrote to the Pope as the most influential man capable

of revising the calendar. However, it wasn't until AD 1412 that Pope John proposed a change and again, in AD 1514, Pope Leo X tried but got no support.

It was not until accurate measurements of planetary positions by Copernicus led to the council of Trent in 1574/75 that the authority and power of Rome was able to propose a change. A

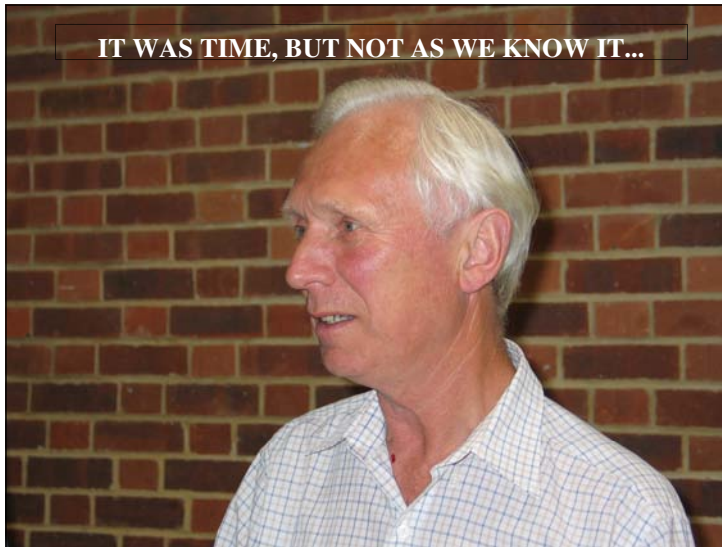
commission was established to investigate a reform and compiled a report and proposal in 1580. This was published in 1582 and introduced the Gregorian calendar, restoring the Spring Equinox to 21st March. Ten days were omitted from October that year and leap years were to be omitted from century years unless they were multiples of 400.

The beginning of the year was moved to January but the tax year remained as before, at 5th April. With the new divisions of the months to the current pattern the calendar will remain in step with the seasons for the foreseeable future.

Although Rome introduced the reforms they were not universally accepted. In England for instance, Henry VIII was opposed to the Pope so automatically vetoed the proposal. Also the loss of ten days was seen by many people as actually stealing those days from their life and this caused riots in some cities. England eventually accepted the reforms after 170 years by which time we were 11 days out of step with other countries. Scotland had changed in 1600 so the calendar was not even common within the British Isles.

Outside Europe, other countries had their own calendar systems, many of which are still in use today. China used a lunar year until 1949 but now recognises the Gregorian calendar as well. For over fifty years the whole world has

IT WAS TIME, BUT NOT AS WE KNOW IT...



June Skies

John W Smith

The Planets

Mercury now finishes its good apparition that occurred last month.

Venus is declining rapidly in altitude and will soon be lost in the Sun's glare. It can be interesting following its phase changes as it descends closer to the horizon.

Mars gradually becomes brighter and larger in angular size as the month progresses. It also climbs higher in altitude making it a more worthwhile object to study. It will be 4 degrees south of the Moon at 19:00hrs on the 10th.

Jupiter, now at opposition, presents a disk 46 seconds of arc across. Although still rather low in the south it is quite bright and easy to locate.

Saturn sits in the evening twilight and its aspect is less favourable as it moves further away from the Earth.

Uranus and **Neptune** are becoming a little more favourably placed.

Meteor Showers

There is only one active shower this month this being the *Ophiuchids* and they have two maxima, one on the 10th and the other on the 20th. Low rates of around 5 per hour are anticipated.

Moon Phases

New	1st Quarter	Full	Last Quarter
15 th	22 nd	1 st & 30 th	8 th

Deep Sky Objects for small telescopes and binoculars

This is the best time of the year for most of the globular clusters. Last month, M13 was included with the suggested viewing and, because it is such a magnificent object, has been included again this month.

M13 NGC6205 This fine object in Hercules is the best of its type in the northern hemisphere and is worth viewing with almost any optical instrument.

M92 NGC6341 This is also in Hercules and although not as famous as its neighbour, it is a first class object and should not be overlooked.

M10 NGC6254 This globular cluster in Ophiuchus lies some 20,000 light years distant yet is easily seen with binoculars. A medium sized telescope will resolve some of the stars near its edge.

M12 NGC6218 This one is almost a twin of M10 and also well worth some time observing. Like M10 some edge stars can be resolved with a medium sized telescope. *For this application a medium sized telescope is considered to be one of some 8 to 10 inch mirror size with a focal ratio about 5 or 6.*

Coordinates

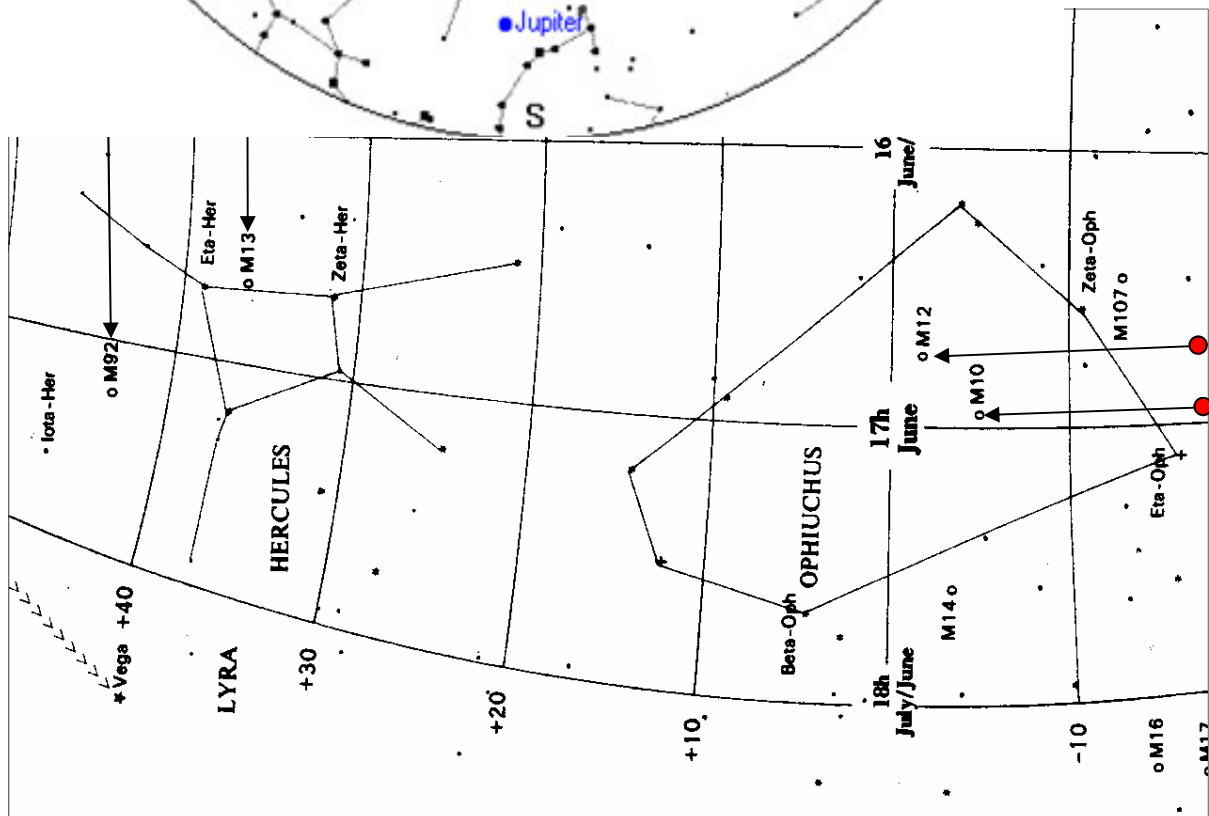
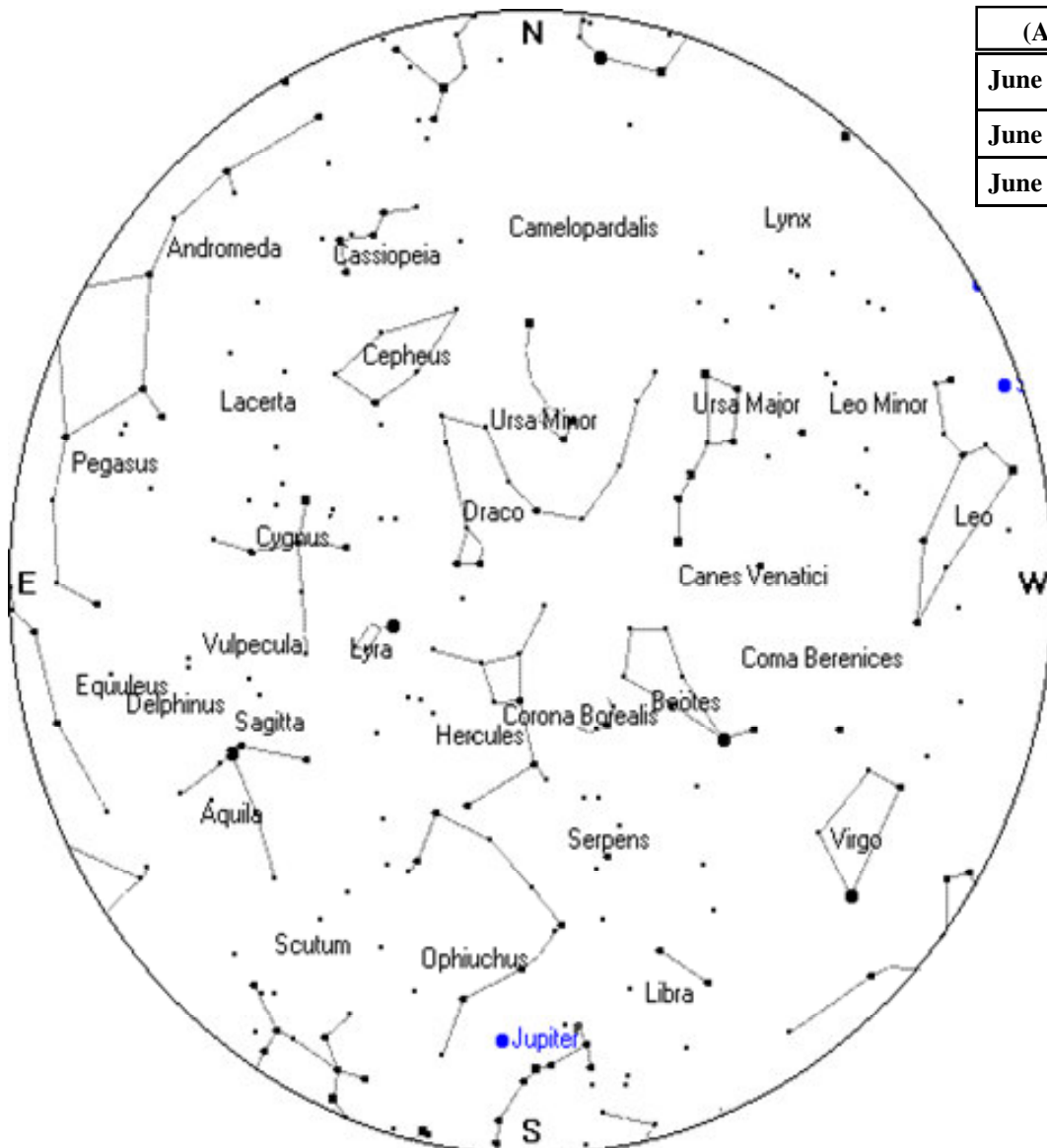
OBJECT	RA	DEC	MAG	SIZE (arc mins)
M13	16h 41m	+36degs 30m	6	10.0
M92	17h 17m	+43degs 06m	6	8.3
M10	16h 56m	-04degs 05m	6	8.2
M12	16h 46m	-01degs 55m	7	9.3

SAGAS VISIT SOON

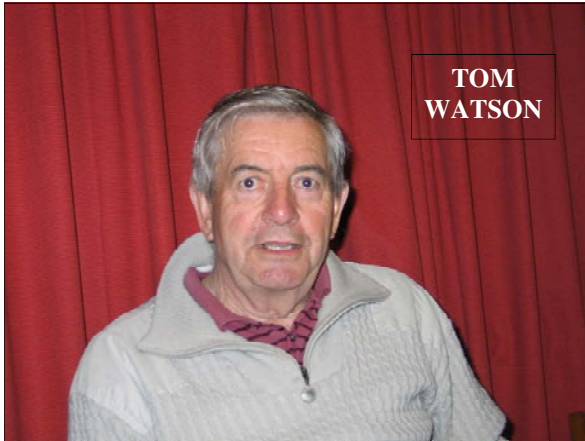
July 14th: plans are being made for VAS to be the hosts this year for the Summer Rally of the Southern Area Group of Astronomical Societies (SAGAS). Richard Flux will be providing further details nearer the date. In the meantime, anyone willing to help out at the Newchurch

Pavilion next to the Observatory, please contact him. We will need providers of transport between Sandown Rail Station and the venue for example, plus volunteers to serve the lunches. An added incentive to be there is that Dr John Mason is pencilled in to give us one of his splendid oratories. All are welcome and a splendid day out is guaranteed...

(All times BST)		
June 01	at	24:00
June 15	at	23:00
June 30	at	22:00



CHAIRMAN TO STAND DOWN



TOM
WATSON

As announced in last month's NZ, the most prominent member of the VAS organisation will officially hang up his Chairman's hat at the AGM in August. Over to Tom:

For the last few years I have been asking new members to consider taking responsibility for running the Society. This year I am taking a more positive line and have decided not to stand for re-election. I hope this will force the issue and encourage some of you to take advantage of the opportunity to come forward.

Actually there is more to it than that. The Society has changed and is now a completely different organisation to the one I took over six years ago. I think I have taken it as far as I can and it now needs some new ideas to keep it moving in pace with the development of astronomy and the changes in the membership.

That is all I wanted to say but the Editor insisted on a valedictory address based on my time in office - even though I have no intention of leaving the Society and hope to be around for many more years. So, here is my entry for the 2007 Nobel Prize for Literature.

When I became Chairman we had about 60 members and had just built an empty Observatory. John Smith donated our first fixed telescope and we became a Mk 1 eyeball observing group. JS was also a leading amateur practitioner of CCD photography but it took infinite patience and many intricate operations to produce a black and white print. We also had next to no money and had only just repaid the loans from members which had kept us solvent.

The current situation is very different. I hasten to say this

has very little to do with me. The Chairman does very little other than keep the Executive Committee in order, make occasional suggestions as to what needs to be done and ensures that committee decisions are implemented.

We have had great success in many of our activities:

-the Observatory has been developed to a remarkably high standard. (it far outstrips my knowledge and this one of the reasons we need a new Chairman);

-this magazine is, thanks to the skill and enthusiasm of its Editor, probably the best in the country;

-the monthly lecture programme covers the leading astronomical subjects of the day;

-Rosemary Pears has shown a remarkable capability in separating grant-making organisations from their money;

-we have a schools education programme

-and the membership has more than doubled.

However we have been less successful in putting astronomy across to the local community. Bert Paice's presentational and financial triumph with the Patrick Moore public lecture has not been repeated. We have had excellent lectures but not the same popular response. Major increases in the cost of hiring the Medina Theatre will preclude any further attempts at public lectures.

Before I go, I think it is worth making a few points on the future of the Society as I see it. There are four challenges. The **first** is to maintain the membership. The large increase in numbers means that we have a wide range in the level of individual knowledge. The new Chairman will need to ensure that there is something for everyone in the activities of the Society. The **second** challenge will be to get maximum participation in the use of the Observatory. The Thursday open nights are a unique opportunity for members to actually learn to use and operate the equipment. **Thirdly** the overriding priority is to keep the money rolling in. The financial state is healthy but we will need to look for new sources of funding - at least until we have paid for the Olympics. **Finally** we will need to maintain our efforts to offer services to the community. Our charitable status is essential to the viability of the Society. So far we have taken it for granted but there are signs that the charity commission is becoming more strict in ensuring that officially recognised charities really do benefit their local

ADVANCE NOTICE

On 4th October, 2007 it will be 50 years since Sputnik became the world's first artificial satellite. Vectis Astronomical Society will be celebrating the occasion at the Observatory in Newchurch on Thursday 4th, Friday 5th and Saturday 6th of October. There will be displays and talks about rockets, and maybe the chance to fire your own water rocket and listen to and see satellites passing overhead. There will also be a quiz with prizes. The party will be open to the public, and we are hoping to invite some school parties to join in.

If anyone has any memories of that time or memorabilia itself or would like further information, please contact Lucy Rogers on:

sputnik@itsonlyrocketscience.com or telephone 01983 731 759.

The art of spiral galaxy computing: a rich area for amateur astronomers

(Part 3)

Dr. Guy Moore

We all know that an object such as a planet, orbiting a massive object like our Sun, travels in an ellipse or a circle – a consequence of the inverse square law of gravitation. However, the ‘special annulus’ described in the May NZ (p7) has ‘remarkable properties’ arising from the gravitational strength varying inversely with the radius from the centre of the annulus, not the radius squared. What sort of phenomena does this lead to? – some **very exciting surprises** await those who investigate the gravitational and orbital properties of this annulus. This is a rich area for investigation by amateurs – much to be discovered is absent from current textbooks on astronomy.

At this point I express my thanks to the NZ Editor for all the work involved in scanning my articles from paper into the NZ publishing system, and for discovering that my programs can be copied from eZenith and pasted* into the BBC Basic emulator available on www.rtrussell.co.uk. (They can also be typed in – I test the programs using the library PCs).

One thing I learnt after years of teaching is that, in the modern world, entertainment has top priority. People find out more if you make it fun! So let’s start here with a fun orbital program that generates orbital pictures. If you discover how to print them in black on white paper (try different MODE numbers line 10), kids can have fun colouring them in – some remarkable flower patterns are possible. Scientists will notice highly precessing orbits or ‘rotating polar cycloids’.

If you type the program, don’t omit the negative sign, line 170, or get figure 0 confused with capital letter O. Having RUN the program, you are encouraged to alter numbers in the program, pull down from RUN to STOP (to get rid of the NO ENTRY symbol). With X=0, the radius of the initial orbit is set in line 50 as the Y value. If Xvel in line 60 is set to 200 (the approximate rotation speed of a spiral galaxy in km/sec), you will see a circular orbit, regardless of the Y value set in line 50, (hence the ‘flat velocity rotation curve’, see April NZ). How much pattern you see depends on the number of steps set in line 220 – with circles, reduce the number of steps or the same circle will be plotted several times with no additional visible

effects. (‘steps%’ means the variable ‘steps’ is an integer with no decimal part – this helps programming, omit ‘%’ and the variable ‘steps’ would be a decimal number which isn’t needed here.)

```

10 MODE 0
20
30 PLOT 69, 500, 500 : REM galaxy centre
40 X=0 : REM x and y co-ordinates
50 Y=300: REM initial orbit radius
60 Xvel=100
70 Yvel=0 : REM x and y velocities
80 dt=0.0001 : REM clock step interval
90 K=200*200 : REM a constant
100 steps%=0
110 REPEAT
120 PLOT 69, X+500,Y+500
130 steps%=steps%+1
140 X=X+dt*Xvel
150 Y=Y+dt*Yvel
160 radius= SQR((X*X)+(Y*Y))
170 gravity= -K/radius
180 Xacc=gravity*X/radius
190 Yacc=gravity*Y/radius
200 Xvel=Xvel+dt*Xacc
210 Yvel=Yvel+dt*Yacc
220 UNTIL steps%=500000
230 END

```

The program computes the force on a particle of unit mass, yielding its acceleration. ‘dt’ is a symbol coming from differential calculus meaning a very short interval of time. As time passes (step by step) the acceleration, velocity and plotted-position of the particle are continually updated. (Speed up the program ten times by putting dt=0.001 but it is less fun!)

I will donate the prize of a large bar of chocolate to the person who generates the most artistic orbital picture, plus smaller bars for other entrants. Perhaps the picture can be displayed using the chosen numbers on the VAS computer projector – and we can watch it happen (and use a clapometer to score?) – or be coloured in on paper (younger entrants).

I am investigating Windows Vista for operating BBC Basic – I have seen it work at D P Computers IoW (High St, Ryde). If fast high definition BBC Basic computing is possible, this will be an exciting system for research and demonstrations.

Guy

*Editor’s Note: Readers of eZenith should copy the above program in bold and paste it into BBC Basic. This will save you much time and will eliminate any syntax errors that invariably creep in.

The Chilling Stars A New Theory of Climate Change,

by Henrik Svensmark and Nigel Calder.

Published by Icon Books Ltd 2007.

Obtainable from Amazon.

Reviewed by Julian Pears.

This book should be read by all astronomers since it puts the subject at the heart of the debate about climate change. It seeks to explain temperature fluctuations both long and short term back through archaeological time, not just the brief span during which humans have been burning fossil fuels.

The foundation stone of the theory is the simple observation that when clouds intervene between us and the Sun we cool. The reverse is true by night. The land loses less heat under cloud cover but over the 24 hour period clouds have a net negative effect on temperature.

The body of the theory traces the connection between incoming cosmic rays whose collision with gases in our atmosphere produce Muons which in the lower atmosphere react with the dimethyl sulphide produced by oceanic algae and plankton to form the specks of sulphuric acid upon which water vapour condenses to produce the droplets which form clouds.

Short term temperature changes are explained by changes in the intensity of the Sun's magnetic field which is instrumental in deflecting incoming cosmic rays. For example, lack of sunspots leads to reduced solar magnetic field to more cosmic rays penetrating our atmosphere resulting in more oceanic cloud formation leading to surface cooling and hence the Little Ice Age.

Long term temperature changes e.g. the Ice Age, in which we find ourselves now (although presently in a relatively short-term intermission) can be explained by our Solar System's passage through one of the spiral arms of our Galaxy. These areas are populated by many bright short-lived stars which terminate in supernova explosions amongst whose products are the high energy cosmic rays which we encounter in vastly increased numbers in such a situation. By contrast, when our system travels between the spiral arms, the relative paucity of cosmic rays results in less cloud cover and hence global warming on a long-term basis resulting in an ice-free planet with high sea levels. Interestingly, shorter 34 million year cycles result from our solar system performing 'dolphin rolls' up

and down through the mid-plane of the Galaxy where again we experience increased cosmic ray activity.

A good correlation is shown between the known climates of past geological periods back to the Carboniferous and our passage round the Galaxy.

The authors demonstrated the reaction between Muons and atmospheric gases with a cloud chamber in a basement in Copenhagen in 2005; and it is a measure of how seriously this theory is considered that CERN is planning a larger-scale cloud chamber to evaluate the effects of accelerated particles upon varying proportions of atmospheric gases.

With regard to the role of CO₂ in climate change it should be noted that whereas cosmic ray levels showed four peak periods and four low levels corresponding with the four major coldhouse and intervening hothouse episodes in the last 550 million years, atmospheric CO₂ levels showed just two highs of 5000 and 2000 parts per million during which glaciation occurred albeit on a modified scale. Thus it appears that cosmic ray intensity is the major driving force in climate change while atmospheric CO₂ even when ten or fifteen times its present level, has only a modifying effect.

Tribute should be paid to Nir Shaviv, astrophysicist at the Racah Institute in Jerusalem and Jan Veizer, geologist based at the University of Ottawa whose collaboration has demonstrated the correlation between our travels around the Galaxy and our experience of contrasting hothouse and coldhouse periods. In more general terms this book shows what great advances in understanding can be made through collaboration between many different specialities.

Finally, my overriding conclusion after reading this fascinating book is that having regard to the fact that our Solar System is embedded in the Orion arm of the Galaxy, there is no likelihood of our experiencing runaway global warming in the next few million years. On the other hand, we face the inevitable prospect of a further freeze-up lasting maybe 100,000 years when permafrost will again affect our southern counties and the northern ice-sheet may extend to a frozen Thames. It appears from the two previous periods of very high atmospheric CO₂ that we shall be unable to prevent such a catastrophe no matter how assiduously we burn fossil fuels!

Jules

Related links to article on Page 9

ESA's Mars Express September 2006 release of Cydonia imagery, including the 3D generated perspectives of Face, along with accompanying misleading text:

http://www.esa.int/SPECIALS/Mars_Express/SEM09F8LURE_0.html

http://www.esa.int/esaCP/SEM9WG8LURE_index_0.html

(More links at end of page 9)

THE MARTIAN ENIGMAS, Part 2

Alan Matthews

On September 21st 2006, the European Space Agency (ESA) released images of Cydonia and prospective-generated synthetic 3D views of the Face from their **Mars Express** probe. These are some of the best images yet, full of complex and intriguing detail. The whole region is littered with weirdness - including the Face, which remains very anomalous, with the generated perspectives supporting the notion of an artificial structure. The outer edge of this mesa looking like it was artificially sculpted highlighting yet again that the structure is not merely a face, but consists of a uniformly graded, leveled, well-manicured plateau with beveled edges sloping downwards from an even height on which the Face is mounted: the whole structure having quite an amazing and unnatural looking regularity and symmetry. Unfortunately, the “debunking” effort clanks predictably forward, as the accompanying ESA article turns into an misleading diatribe, merely reiterating pop-science myths that will likely not survive archaeological appraisal, and is, depressingly, the “state of the art” when it comes to mainstream coverage of the Cydonia anomalies. In an increasingly desperate effort to combat any rising scientific or public interest in the “Cydonia question”, the ESA provides factual misrepresentations (such as the demonstrably inaccurate portrayal of the Face as a trick of light) and pointedly refuses to mention other, perhaps more illuminating, anomalies plainly visible in the Mars Express data. This is a shame because the imagery is excellent and offers a basis for legitimate, objective assessment - which the current space science milieu will not allow.

The ESA article contains stark historical inaccuracies about the origins of the controversy. The facts are that the Face, discovered by Tobias Owen, was presented to the public by the late Gerry Soffen from NASA's Jet Propulsion Laboratory (JPL - responsible for all planetary exploration), who assured the media that a SECOND image of the Face, supposedly taken a few hours later, demonstrated that the face-like qualities in the original Viking frame were illusory. Embarrassingly for NASA, this second, incriminating image never existed. Worse, the Viking Orbiter was busily photographing the other side of the Martian globe at the time arbitrarily offered by Soffen; there was no way it could have taken a disillusioning image of the Face even if JPL had wanted it to. Interestingly, further sleuthing revealed that Viking did manage to capture another image of the Face, but only days later. It was never publicized, perhaps for understandable reasons. Taken at a more revealing sun-angle than its predecessor, Viking frame 70A13 not only confirmed the salient facial resemblance noted by Owen and Soffen, but showed a continuation of the “mouth” feature and, despite apparent odds, a second “eye.” In any case, NASA had never “correctly interpreted the image as an optical illusion caused by the illumination angle of the Sun,” having never investigated it. And if the facial likeness was merely an illusion, why does it persist in more recent images? One would rightly expect a natural surface formation to look less like a face when seen in high resolution

The references to “enthusiasts” and “fans” in the ESA's September 2006 article suggest the possibility of artificial construction is confined to a population of untrained Web-surfers. This is a drearily typical “debunking” myth. Since its appearance on the cover of the esteemed journal “**Applied Optics**,” the Face (and related enigmas) has received much attention from well-qualified scientists and researchers. It's worth noting that few, if any, credentialed proponents of the “Artificiality Hypothesis” are adamant that Cydonia is home to extraterrestrial ruins. But their

pooled research reveals an enigma deeper and far more compelling than that mentioned by the ESA. While the Face exhibits the erosion and degradation expected of a mile-long morphology - especially on the eastern side, which appears to have collapsed inward under a hefty layer of accumulated debris - it features secondary facial detail consistent with the impression of an artificial construction. Most notably, the western “brow” shelters an anatomically correct “iris,” properly positioned within a unique almond-shaped basin. And at least one “nostril” - never actually visible in the original Viking image - is plain to see; while its origin remains an unanswered question; flatly refuting its existence smacks of a deliberate attempt to “make the Face go away” in the public mind. ESA's latest offering isn't the first such effort, underscoring the Face's obstinate tendency to look like a face - regardless of the will to debunk.

Despite the ESA article's claims that the “*the face remains a figment of human imagination*” and that NASA's 1998 and 2001 images “*further confirmed this conclusion*,” neither of the images cited has confirmed either conclusion except for those unable, in all conscience, to accept the spectre of archaeological sites on another planet. The 1998 image, known derisively as the “catbox” because it looks like scratchings in kitty litter, received justified scorn and scepticism from the Mars anomaly “invisible college,” having been needlessly subjected to a high-pass filter that served only to suppress detail - precisely reflecting JPL's stated intent to “scotch this thing for good.” Wary of JPL's verdict, Lan Fleming, an imaging specialist contracted to NASA's Johnson Space Flight Center, went so far as to try to deliberately reproduce the 1998 image: only to find that he was unable to match JPL's apparent incompetence despite access to sophisticated software. This strongly argues that JPL's treatment of the controversy has more to do with PR than science. This conclusion is made almost palpable by the space agency's continued “bungling,” including showing an unprepared public a false-colour rendering of an *upside-down* Face, ostensibly to highlight the capabilities of the Mars Global Surveyor's laser altimeter.

The Cydonia “skull” image featured in the ESA article appears to be a red herring invented by ESA in order to illustrate the human brain's alleged predisposition to see faces. Given its dubious value as a simulacrum, I'm distinctly unsurprised that it has never been encountered before in any of the Cydonia research. Essentially, geologists claim that the “Face on Mars” only looked like a face to certain people - “believers,” presumably - because of a neurological predisposition to “see” faces when presented to novel stimuli. But we don't hear that the “hard-wired to ‘see’ faces” argument, in relation to this Martian structure, was refuted by scientists who have objectively analysed the formation in the past. This sort of thing is symptomatic of a very clumsy and hopelessly binary way of looking at the world. The powers that be do a studious job of ignoring neighbouring anomalies, because the Face is only one of many oddities in the region. We're seeing a deliberate campaign to stomp out interest in these features by obscuring the more subtle aspects that are vital to a proper investigation. If we're to take the possibility of ET ruins seriously, the tools of archaeology, architecture and even art need to be brought to bear on this lingering enigma. Any thoughts to *New Zenith* or, conversely, I can be e-mailed at:

alan.matthews3@jobcentreplus.gsi.gov.uk

Original 1976 NASA/JPL press release concerning the Face, which constitutes a scientific fraud (notice also, the reason why the image was taken in the first place):

<http://www.msss.com/education/facepage/pio.html>

Lan Flemings attempt at the “catbox”:

<http://vgl.org/webfiles/mars/face/catbox2.htm>

INTERESTING FACTS

PART 31

If one considers two points, A and B, the distance between the two may be measured quite precisely: A to B = x units of distance, say. So far, so good. Now consider the reverse: B to A distance does not necessarily equal distance A to B. How come? A simple experiment may be undertaken by driving from, say, the bus station in Newport to Halfords store in Lower St James's St. Not a great distance, you will agree. Now try driving back to the bus station!

There are several ways but all incur much doubling back and forth and up and down parallel one way systems. In this case from A to B will take about 2 minutes given a clear road, but to get back to the starting point, one should allow three to four times the original journey time.

Reciprocity? It does not exist on Island

JUST WHAT IS GOING ON HERE?

(New Zenith May 2007)



Last month, readers were asked to find out what was taking place in the above picture. One could be forgiven for thinking that a colostomy bag was being fitted to an orange whale, but nothing quite as simple as that, as you might have expected.

In fact, it shows technicians repairing immense hailstone damage to the Shuttle external liquid fuel tank when it was caught napping on the launch pad.

Submissions to the **NEW ZENITH** are very welcome and should be sent to the 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)

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

Website of the Month

www.skyatnightmagazine.com

Calling all telescope owners! We need images of you and your telescope to put in our Readers' Scopes section of the letters page in BBC Sky at Night magazine. If you'd like to be featured, send in a photograph of you with your scope along with a paragraph (about 80 words) talking about your kit and what you like to observe. Remember to give us your full name and details of where you're from. Email: skyatnight@bbcmagazinesbristol.com or post to 'Readers' Scopes', BBC Sky at Night magazine, 14th floor Tower House, Fairfax Street, Bristol BS1 3BN. (Digital images should be at least 4x4cm at 250 dpi, but the higher the resolution the better.)

New FREE reader classifieds

Do you have a scope you'd love to sell? Or some kit you're hoping to swap? Advertise your telescopes, binoculars and astronomical accessories up to a maximum total selling price of £1,000 through our brand new, free Classifieds section. We can't take details of adverts over the phone, but you can fill in the form on the Classifieds page of BBC Sky at Night magazine, or from the website above. Just follow the link! We'll publish your ad in our next available issue. If you have any good quality photos of the items you're selling, send them to us at the address above, or upload them using the form on our website.

PHOTO QUALITY IN THIS ISSUE

All pictures are good quality

LAST WORDS

Q How many astronomers does it take to change a light bulb?

A Two. One to actually carry out the task, the second to stand by and complain bitterly about the increased light pollution...

FIND VAS ON THE INTERNET

Members should note the Vectis Astronomical Society Website address:

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

Vectis Astronomical Society Nomination Form

For those wishing to stand for election at the **Annual General Meeting** of the Society to be held on Friday 25th August 2007 at 7.00pm.

Name and Address of Nominee

.....

.....

Standing for:- Chairman, Secretary, Treasurer or Committee
(Please indicate)

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 nominate).
3. All completed nomination forms to be received by the Secretary not later than the monthly meeting on Friday July 20th 2007. **NOTE** this is the third Friday of July.
4. The Committee consists of not less than six members.

John Smith VAS Secretary