



January to April 2011



Issue 8

Edited by John Murrell

### Special points of interest:

- Next SAGAS Meeting Saturday 15th January 2011 @ Chichester
- SAGAS needs your help as a committee member to help run the organization.
- We need a Society to organize the SAGAS Summer 2011 meeting in case the Portsmouth event does not happen.
- The AGM is on Saturday 16th April 2011 @ Chichester

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## Isle of Wight Star Party 3rd to 7th March 2011

The Isle of Wight Star Party is held at the Brighstone Holiday Centre , Military Road, Isle of Wight. The holiday centre is located on the South West Coast of the island in some of the darkest skies in the South East of England. This year the Star Party will be held at new Moon between the 3rd & 7th March 2011.

The holiday centre offers Chalets, Beach Huts and space for Caravans & tents. In addition there are a number of local B&B's and self catering cottages but this means driving from the site without your lights disturbing those still observing. The site is quite exposed so you need to take plenty of warm clothing and good guy ropes for your tent and to secure your telescope if you are leaving it out. Details are still being confirmed but bookings are being taken from early January 2011. In previous years they have organized a discount on Wight Link ferries, it is anticipated that this will be available this year as well. More details and how to book can be found on the star party website at <http://www.iowstarparty.org/IOWSP/Home.html>. There is a small fee to attend the event plus your accommodation charges.

The local sky is quite dark, an impression of the view can be seen on the University of Hertfordshire All-Sky Cam located at nearby Niton see <http://star.herts.ac.uk/allsky/index.php?c=3>, the site at Niton has some light pollution from St Catherine's Lighthouse as well as passing ships. These are a lot less evident at Brighstone resulting in even darker skies.

If the sky is not clear lectures are given in the holiday centre. A number of activities are planned during the day or you are free to visit the attractions on the Isle of Wight.

## Chairman's Report by Phil Alner, Acting Chairman

*A Happy and prosperous New Year to you all.*

### Best attendance at quarterly meeting.

The attendance at the October meeting was the best we have ever had - 30 individuals representing 19 Societies. This is very encouraging.

Thanks to the Staff of the Southdowns Planetarium we were able to use the hall for the first time and I think all will agree it made for a better meeting. No more bobbing up and down to look over the wall of the Zeiss projector.

As you are aware the committee received 4 resignations just before and at the October meeting. These were for various reasons for which I will not go into here. This left just 3 of us. As I was in the chair at the October committee meeting, I offered to take the reigns as acting Chairman until the AGM in April. This was accepted by the committee and subsequently by the main meeting that followed.

Continued on Page 3

## Editorial

As you will read elsewhere in this issue our Newsletter Editor resigned at the October meeting. As we have not had any volunteers I have agreed to edit this issue of SAGASoffLine in the hope that we have a volunteer at the Annual General Meeting on Saturday 16th April 2011.

I hope you enjoy this issue and I wish to thank all those who have volunteered articles and those who have written articles with a little coercion. I have tried to include a mixture of stories which should interest both those responsible for running local Astronomical Societies and those of interest to members of SAGAS societies.

Remember this is your newsletter and we need your help to provide stories that are informative and interesting. Contributions for future editions of SAGASoffLine can be emailed to Newsletter11@SAGASonLine.org.uk where they will be directed to the current newsletter editor.

In the last edition the previous editor suggested that Croydon AS should report on their 'Ask an (amateur) Astronomer' meeting. We have provided a report on this as well as our 'Letters of Astronomy' series. The letters of Astronomy was designed to encourage members new to public speaking by giving them a short time slot to speak on a subject of their choice. These may provide an alternative or supplement to the more usual society lectures.

I hope you will forgive any errors as this is the first newsletter I have produced using Microsoft Publisher and I am still finding my way round the features of the programme.

## Sunset & Sunrise Observing Sites - an opportunity for co-operation ?

A number of interesting astronomical events such as conjunctions and the recent partial solar 'eclipse' occur at Sunrise or Sunset. Views over the Sea are normally the best (fog permitting) but the inland societies need to find places with as low a horizon as possible in the appropriate direction.

I used a combination of Google Earth and site visits to locate a reasonable position for the eclipse on the top of Riddlesdown near Purley, Surrey. I surveyed the site but still ended up with a discrepancy between the Google Earth direction and my survey of 10 to 15 degrees.

It occurs to me that SAGAS societies could usefully maintain a database of locations with good horizons. In addition to location and access details this needs to have some sort of plot or image of the height of the horizon in different directions. An all round image can be obtained with the photo stitching software available for digital images.

Is there a volunteer to organize this ?

John Murrell

## SAGAS Membership changes

Two new societies have joined SAGAS in the last 3 months.

Adur Astronomical Society are a new society that is not related to the old Adur AS. They currently have 30 members and hold 9 meetings a year with a non-academic speaker. Their key activity is astronomical Imaging.

HantsAstro are a virtual group who have a strong internet base and they rent sites for astronomy in dark areas in the SE England.

More details on both societies and the other SAGAS societies can be found by following the link from the SAGAS home page at [www.SAGASonLine.org.uk](http://www.SAGASonLine.org.uk).

Unfortunately neither Orpington AS or Richmond & Kew AS have renewed their memberships so will no longer benefit from being members of our organisation.



**The editor observing the last transit of Venus.**

**You should not point your camera at the Sun but this was taken by a newspaper photographer—his Canon 1D survived !**

**Two new societies have joined SAGAS — we now have 24 members.**



**What are the benefits to SAGAS members ?**

**Look at the 15 benefits for £15 on our website**

### Chairman's Report (continued from Page 1)

We have since co-opted Tony Questa from Guildford AS who very kindly showed interest in taking on the Treasurers' post (acting).

One of the strengths of SAGAS is the exchange of ideas, experiences and best practices at the quarterly meeting. This can also encourage interaction between member societies and individuals outside of the meeting.

There are several documents and procedures that each society has to generate

This is where SAGAS committee could help. Not by rewriting but collating the best bits from those already engineered by others. Then making these available to member societies.

For instance; there is a lot of debate about the requirements of the CRB (Criminal Records Bureau) and ISA (Independent Safeguarding Authority) in relation to child protection and public events held by astronomy societies. (This was covered by Graham Bryant in our meeting of October 2009.) The minutes of that meeting can be found in 'Business Meeting Records' on the SAGAS web site. Although it still seems to be that definitive and legal requirements are unclear. This is a subject that will be discussed in our January meeting.

### AGM Nominations

Although the AGM will take place at the April meeting we need to start thinking about who we will be nominating for the committee posts.

It is proposed that those standing for executive posts i.e. Chair, Secretary and Treasurer, should be supported by a written reference from their Society.

This is to strengthen the confidence of the nomination for the rest of the SAGAS members.

### SAGASonLine Newsletter

My thanks John Murrell, our webmaster, who has taken on the task of putting together this 'SAGASonLine' newsletter. It is a difficult task without submissions from our members, so please help by sending in items of interest. I'm sure you like reading of others experiences and news, so how about submitting some of yours.

John has also set up onLine calendar on the website for members to be able to see what other members are doing, but this requires members to enter their own events. This is also a way of communicating your events to your own individual members. Please make use of this facility

### Quarterly meeting hosts

As I'm sure all of you know each of the Quarterly meetings are 'Hosted' and chaired by member societies. It was hoped in the past that we would be able to run in sequence down through the list of members but this seems to have gone by the board.

So this is a request for those members that have not had the privilege to come forward and offer their services. It is not an onerous task; all you need is one person to chair the meeting and another to take the minutes (which would be submitted to the SAGAS committee by two weeks after the meeting) and possibly provide a post meeting entertainment – in the form of a talk, a demonstration or anything with an astronomical theme.

It would be helpful for the committee to know that we have a chairing member for each of the future meetings.



**SAGAS  
Summer 2011  
Meeting - your  
help is needed  
to organise the  
meeting.**

**Chairman's Report (continued from Page 3)**

SAGAS members	
SAGAS Management team	Jan 2008
Adur AS	
Ashford AS	
Basingstoke AS	
Brighton & Hove AS	April 2008
Cody AS (Farnborough)	Jan 2009
Crawley AS	May 2007
Croydon AS	Oct 2007
East Sussex AS (ESAS)	April 2009 & Oct 2008
Eastbourne AS	
Farnham AS	Jan 2010
Foredown Tower Astronomers	April 2010
Guildford AS	Feb 2007
Hampshire AG	Oct 2009
Hantsastro	
Horsham AG	
Lewes Astronomers	
Newbury AS	
Solent AS	
South Downs AS	
Vectis AS	Oct 2010
Wadhurst AS	
Wealden AS	
Wessex AS	Jan 2011
Worthing Astronomers	

11 of our 24 members have been in the chair .

**Summer meeting for 2011 and beyond**

Here we are in 2011 and we don't have definitive arrangements for the Summer 2011 meeting as yet. Again as, above, it would be nice to have a future programme Summer Meetings.

**Quarterly reports**

There seems to be reluctance in sending in the quarterly reports as we have had so few this time. I wondering why this is and therefore I will raise this point at the January meeting.

My thanks to John Murrell and Keith Brackenborough for 'sticking' with the committee and Tony Questa for taking on the Treasurers post.

Wishing you all the best for the coming year and hoping to see you on the 15th January

Phil Alner

Acting Chairman SAGAS

**SideByte**

**The image of lunar mineralogy earlier in this edition is from NASA Image of the Day at <http://www.nasa.gov/multimedia/imagegallery/iotd.html>**

**More great images here**

**CfDS & CPRE Orion Star Count Monday 31 January – Sunday 6 February**

The Campaign for Dark Skies together with the Campaign for Rural England are holding a joint Orion star count from Friday 31st January to Sunday 6th February 2011 . **Member Societies are requested to ensure that measurements are made in their catchment & Observing areas and the results submitted.**

More details at <http://www.cpre.org.uk/campaigns/landscape/light-pollution/start-count-week-2011>

Remember Light Pollution stops us seeing the wonders of the Universe and robs us and our Children of their view of the Universe. It's the only sort of pollution that can be stopped at the speed of light !

John Murrell

### Croydon AS – Ask an (Amateur) Astronomer by John Murrell

The last edition of SAGASoffLine carried a comment asking how the Croydon AS 'Ask an (Amateur) Astronomer' meeting was organized and went.

Croydon AS have had a number of 'Ask an Astronomer' evenings - the format has evolved slightly and now follows the following format. As quite difficult questions can be asked and our members are not experts in every field we ask for the questions to be submitted in writing at least 2 weeks prior to the meeting. In addition to the question we ask for the name of the person submitting the question and also contact details in case the person assigned to answer the question needs the question clarified. It is helpful to have the date of the 'Ask an Astronomer' meeting on the form in the hope this encourages those asking the questions to turn up to hear the answers !

Completed forms are either accepted at the meeting or else are sent by email to a central collation point. At the deadline date one of the members (usually me) then distributes them to various members who have shown an interest / knowledge in a particular area and are willing to both research the answer and stand up and answer it in the meeting. If there are too many questions we tend to take the first 10 or so this encourages people to get their questions in early ! Spare questions can be held for the next event.

Some questions are closely related and in that case they are answered as one—the person answering it usually being given extra time.

Each of those answering the question are given a pre-prepared PowerPoint template with the question details and the names of the submitter & person answering the question. The use of a template ensures some consistency to the meeting otherwise it becomes a set of disjointed presentations.

The duration to answer each question depends on the numbers submitted but about 6 to 10 minutes each including the changeover is about right. Time management of the meeting is quite important if it starts to run late in can go very wrong and either some questions do not get answered or the meeting overruns.

To ensure a smooth change over between speakers it is important to get all the PowerPoint presentations in before the meeting. I usually name the files starting with a number the order they will be answered. This way it is easy to select the files as they will be in the correct order in the dedicated folder. Also make sure you save all the files as a PowerPoint Show (.PPS or .PPSX) this way they open automatically on the first slide without wasting time opening PowerPoint and selecting the first slide and then running the presentation. You could also combine all the files in order in one presentation which would be even more seamless.

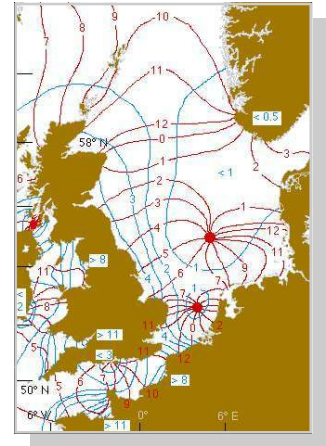
The last Croydon AS Ask An Amateur Astronomer went quite well though 3 of the people asking the questions were unable to attend and one of the speakers was unable to attend so I ended up presenting his slides. Overall the members seemed to enjoy the meeting , they learnt something and have asked for more.

### What Was the Star of Bethlehem? By Brian Mills, Wadhurst AS

Surely one of the biggest and most enduring astronomical mysteries is "What was the star of Bethlehem"? If we take the Biblical story literally then it can only be described as a miraculous event and will not stand up to scientific scrutiny.

Of the four gospels the only one to mention the star is that of St. Matthew although we ought to remember that it's very unlikely that he wrote it himself as it's now thought to date from AD85 to 90.

St. Luke tells the story of the nativity but there is no mention of the star, the Magi, Herod or the slaughter of young boys. Instead he talks about the manger and the shepherds who were told of the birth in a vision. The star is also mentioned briefly in the Protoevangelium of James - a book that was used in the early church but didn't make it into the New Testament. However theological scholars seem to be of the opinion that this is a low quality account written around 150AD and is



A diagram used to answer an Ask an Astronomer Question on Tides

**PowerPoint presentations should be saved as PowerPoint Shows (.PPS or PPSx) so they open automatically at the first slide without having to fiddle about in PowerPoint with the audience watching.**

## What Was the Star of Bethlehem? (continued from previous page)

mostly a re-telling of St. Mathew's gospel.

There is a suggestion that the reason the star is mentioned only in Matthew is that he enhanced his version to make it fit with earlier prophecies that certain groups would like to see fulfilled. There is also evidence to suggest that Mark's was the first written gospel (around AD70) and that Matthew and Luke used this to help write their own later accounts. Matthew makes reference to the prophecy of Balaam which appears in Numbers 24:17 (often called the "Star Prophecy") and says:-

"I shall see him, but not now: I shall behold him, but not nigh: There shall come a star out of Jacob, and a sceptre shall rise out of Israel ....."

This was seen as a prophecy that a Messiah would come and that a star would be the sign of his birth.

There are three types of event that we can attribute the star to:-

### 1: A Miracle

As we've already said if it was a miracle then we're wasting our time looking.

### 2: A Legend

This would be entirely a work of fiction possibly to give credence to an earlier prophecy.

### 3: An Astronomical Event

Possibly it was a conjunction, a nova, a supernova, an occultation or even a comet.

One thing that hinders analysis of the facts is that translations and interpretations of the original texts vary considerably. For example if we look at Matthew 2:2 he says - "For we have seen His star in the East and have come to worship Him". A later translations suggests it ought to read - "For we have seen His star at its rising and have come to worship Him". But David Hughes, a scholar who has spent considerable time studying the star and its background, says that the original text has a very specific meaning and so should be read as - "For we have seen His star at its heliacal rising and have come to worship Him". So what do we mean by heliacal rising?

The Sun appears to move eastwards by about 1° per day when compared to the background stars. So at some point the Sun will appear to have just passed a star by enough for it to be visible in the dawn sky immediately before the Sun rises. The very first time it is seen in this way is called its heliacal rising, and these heliacal risings were used as a calendar in the east with Sirius being a prime example because its heliacal rising signalled that the flood season of the Nile was imminent.

If we assume that the Star was seen by the Magi at its heliacal rising (in other words roughly in the east) then the journey to Jerusalem would have taken them almost due west meaning the star was behind them. This isn't a problem because there is no mention of the star guiding them from their home (Babylonia or Persia) but just on the final stage from Jerusalem to Bethlehem.

If the Magi came from Babylonia then the journey ahead of them would be 500 or 600 miles. If they came from Persia then it's roughly half as much again. Whichever it was, a reasonable assessment is that it could have taken 2 months or more from the star being sighted until they reached Jerusalem. It has been suggested that the Magi may have already started out on their journey to Jerusalem, before the star was seen. Matthew tells us that after they arrived in Jerusalem Herod spoke with his scribes and then with the Magi themselves. He says Herod was "troubled" - not surprising when he has just found out a new King of the Jews has been born and his rule could be under threat. There is a suggestion that Herod hadn't seen the star, although this may have been simply due to the fact that no one told him because they feared him.

We said that the sun appears to move eastwards by about one degree daily, but also because of the Earth's journey around the Sun we are presented with a slightly different view of the stars each night. As an example, if you go out tonight (late December) at 9.00 p.m. and note the position of the star Procyon in Canis Minor it will be above the eastern horizon. If you look in late



**This article may be a little late for Christmas 2010 but will enable you to prepare an answer for Christmas 2011. I believe it is clear that Jesus was not born in December so it may be even more timely. Ed**

### What Was the Star of Bethlehem? (continued from previous page)

March (in 3 months time) at 9.00 p.m. it will be just past south. This movement would also have been true of the star of Bethlehem if it were an astronomical object. It may have appeared in the east but by the time the Magi reached Jerusalem it could well now be closer to the south, and Bethlehem is south of Jerusalem. "And lo the Star, they saw in the east, went before them".

Of course one fundamental question is "When was Jesus born?" We know BC means Before Christ and AD means Anno Domini (in Latin "in the year of our Lord") so can we assume that as the date is AD 2011, Jesus was born 2,011 years ago - sadly it's not that simple. The Roman calendar had been in use for some time and used the year in which Rome was founded as their starting point. The year consisted of 10 months with leap months being inserted until Caesar altered this by adding two extra months and leap years. Pope Gregory adjusted it in 1582 by removing ten days because the leap year had caused slight over adjustment. He also changed the way leap years were implemented.

However, we must also consider that when the monk Dionysius tried to calculate the year of the nativity he made several errors as the astronomer Mark Kidger points out. He appears to have ignored the year "0" and also four years when Caesar ruled under a different name.

There is also other information that helps us pin down the year. Firstly we know that Herod died in 4BC and that coins minted by his successor in that year have been found. Secondly Herod had all boys of 2 years and under killed, so Jesus was probably considerably younger than two to allow a big margin of error. We also know a census was ordered in 8BC although its purpose isn't clear. It would surely have taken some time for this instruction to reach places like Jerusalem and outlying villages. Taking all this into account the most likely year of the nativity is 5BC.

Having established the approximate year of Jesus' birth we can turn our attention to the Magi - who were they and where were they from? There is an assumption that there were three of them (the Bible does not state numbers or names) because three gifts were given. The most widely accepted description of them is that they were "wise men" of a priestly caste who interpreted the stars and journeyed to Jerusalem as envoys, with their most likely country of origin being either Babylonia or Persia. Babylonia must be favourite because it was steeped in Jewish tradition and because of its long history of astronomical observations, some of which still exist today on pieces of tablet. Conversely Persia has almost no records of observing the skies although their religion does also mention the coming of a Messiah.

We can now look at what the star itself might have been. In order to be a candidate the event must have occurred in the east around the date of the nativity. It must also have been unusual enough to send the Magi on their journey but must have been long lasting enough to still be visible once they had reached Jerusalem. Venus has always been a favourite although we know the Babylonians knew of it and recorded its movements for more than a thousand years before the nativity. Occultations have been suggested although many of them would have previously been observed and they don't really "fit the bill". A comet may be a better option although the description in Matthew is of a star and not a "broom star" as comets were then known. Halley's comet is no longer a contender because its period has been calculated to show it would have returned in 12BC.

Could it have been a planetary conjunction? It is possible as something of this kind in the right constellation would be taken as a portent of a royal event although recent calculations show that no such conjunction occurred where two planets appeared so close as to appear as one object. Would a nova or supernova be a possibility? No supernovae are recorded anywhere close to the correct period although the Chinese do mention a nova in 5BC. The meteor theory still has its followers although suggesting that two fireballs occurred at just the right times may be a little far fetched. Also they don't fulfil the Biblical description at all. However, there is an interesting theory put forward by Mark Kidger that utilises elements from a variety of events to suggest a workable hypothesis. He suggests that a series of events occurred that led the Magi to believe that something truly monumental was about to happen and then a singular event that was the final sign.

His theory is that the Magi observed the rare spectacle of a triple conjunction of Jupiter and Saturn in Pisces (a constellation associated with the Jews) in 7BC. The following year they saw Jupiter and Saturn joined by Mars (also in Pisces), and then a double occultation of Jupiter by the

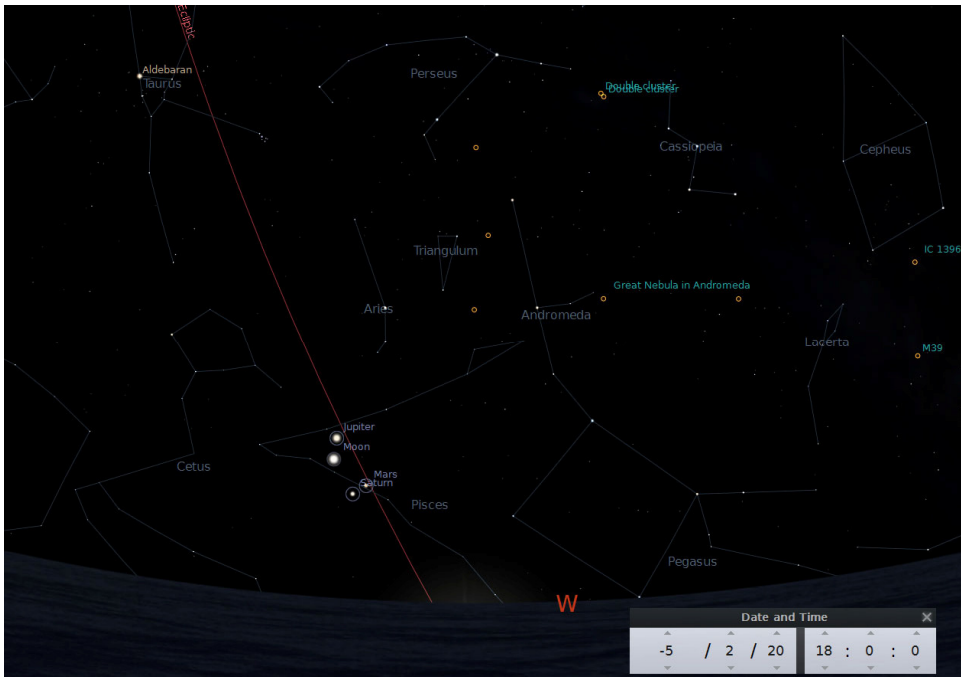


#### SideByte

**6th June 2012—your last chance to see the transit of Venus. If you missed the last one get your travel plans sorted soon. If you miss this transit you have to wait until 2117 !**

### What Was the Star of Bethlehem? (continued from previous page)

Moon. Then in 5BC they would have seen a pairing of the Moon and Jupiter and a second pairing of Saturn and Mars. All these things would have been analysed by the Magi and an astrological meaning deduced. The final event that sent them westwards was the appearance of a nova on the borders of Aquila and Capricornus - an area of sky in the east at dawn. A new star would have told them that a royal birth had occurred and they would have set out for Jerusalem - the capital of the Jewish world.



There is a possible problem with explaining astronomically how a star can “stand over” a particular place, although the simplest (but not necessarily the most plausible) suggestion is that it was a reference to it culminating (reaching its highest point above the horizon) before sinking towards the west to set.

Whether this latest suggestion is correct of course we cannot say. It does however address all the issues required to put it in the correct time frame and takes into account more fully the part the Magi could have played. As far as a definitive answer is concerned - the jury is still out.

**Robin Durrant (Adur AS) is offering a lecture on 'imaging, simple & basic' using DSLR cameras'**

### Adur raises funds for 'The Sussex Snowdrop Trust' and offer a lecture on DSLR imaging

Adur Astronomical Society held its Xmas meeting on the 7th December with Ninian Boyle as our main Speaker. A raffle was held with some prizes donated by First. Light Optics and Modern Astronomy.

All proceeds from the meeting were donated to "The Sussex Snowdrop Trust" a charity for children with terminal or very bad illness. The sum raised was over £200.00.

To continue raising funds for the Trust, the chairman, Robin Durant is offering a lecture entitled " imaging, simple & basic" using DSLR cameras. If any Society is interested, please contact Robin on 01273 881965

Robin Durant



### The Astronomer - by Guy Hurst, editor of The Astronomer

The Astronomer, of which I am editor, is a international monthly magazine which has been published in mono paper format and sent by post to subscribers since 1964. During the last year we have also launched an alternative service whereby the magazine is produced in PDF and colour for e-mailing to our readers and this has already proved very popular as more and more people are becoming 'e-readers'. In addition to viewing the latter on your PC, many other devices such as the Kindle allow you to import PDF copies to be read on the move.

The main aim of TA, as it is affectionately known, is to publish observations, images and articles as fast as possible and to provide feedback on a wide variety of objects, in fact anything visible in the night sky or, indeed, daytime such as solar studies. Observations made in one month are sent by the 5th of the following month to a series of sub-editors and the results published in the magazine by the 20th so some observations in print were made less than a month before. Feedback is vital to active astronomers who can compare their results with others and investigate any variation within their specialist area. Subscribers and contributors range from experienced amateur astronomers to some professionals and about a third of our readers live outside of the UK.

In addition to a fast publication such as the TA magazine we provide an optional extra in the form of e-circulars, sent at the rate of about 100 per year to your mailbox. These bring even faster news of discoveries and objects you could be amongst the first in the world to follow up, a vital part of role of amateur astronomers. Potential discoveries can also be reported to us at any time and full contact details and other news can be found on our website at: <http://www.theastronomer.org/>

Each year we hold a meeting of observers in different parts of the country and in recent years these have been based in the Norman Lockyer Observatory, St Mary's Church Hall in Basingstoke and in 2010 in Wakefield. We often have visitors from abroad to give talks including top professionals so these are events not to be missed. Many other events are arranged such as the famous Brian Marsden Quiz sent out by e-mail each Boxing Day with a prize for the fastest all correct set of answers received.

Essentially TA is a worldwide family of extremely enthusiastic observers who use the magazine as a communication centre and no doubt exchange many personal messages amongst their own groups.

For further information on subscriptions or to request a sample copy please contact our secretary Bob Dryden, 21 Cross Road, Cholsey, Oxon, OX10 9PE

Tel: +44 (0) 1491 201620. e-mail: [secretary@theastronomer.org](mailto:secretary@theastronomer.org).

I look forward to hearing from you and hope you will wish to join the ranks of one of the world's leading groups for active observers.

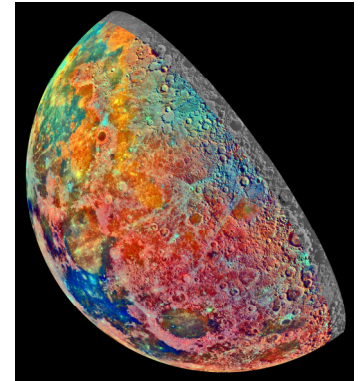
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Comet Image © Martin Mobberley

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Astronomer'  
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worlds leading  
observing  
groups

### Enhanced Colour Lunar Image by Robin Durant



NASA image showing lunar mineral distribution

Robin took this image using his New 10" Dobsonian Skywatcher 250 Multiflex with a Canon 450D. The image consists of 20 frames taken at 1/300th second at ISO 100. They were stacked in Registax which was difficult due to the very large size of the files ( 4920x 2856 pixels) but I felt that I needed them to be this size to get a good resolution and to bring out the natural colour. It took about 3/4 hour to stack the frames !

Robin made a slight adjustment to the Registax Wavelets, second row down and saved it. I then opened the saved file in Adobe CS3. The image did not need any processing so he opened "Hue & Saturation" and moved the saturation slide slowly to the right and the colour just emerged.

I believe the colour shown on the image shows the varying elements that the moon has.

For more information on Robin Durant's Astronomy visit his web site at <http://www.robin-durant.com>



If the saturation increase does not work, you can try "Auto Color" first then Saturation after.

Robins 10" Skywatcher 250 Multiflex Dobsonian

## A loft Window Observatory by Peter Bolwell, East Sussex AS

A Novel Approach to Observing

Choosing a telescope is one of the best parts of taking up astronomy – flicking through the catalogues, pouring over the reviews in the magazines, maybe trying out one or two at ESAS observing evenings – and finally you make your choice. With joyful anticipation you get your telescope unpacked, assembled, and ready for action. So now comes the next question, to which perhaps you gave very much less consideration: where exactly will you be using it?

Depending where you live, this may be quite a tricky one. It certainly was for us, at the bottom of our close with houses and trees all around us. We have actually cut down several trees that were in our garden, but of course we can't do much about the trees in the neighbours' gardens, far less the houses! Setting up the telescope up in the garden – front or back - would have been quite useless. We could bundle the thing into the car and drive up to Fairlight or somewhere like that, but that would mean that every chance opportunity to do a bit of observing becomes something of an expedition – even more so if, as in our case, we are talking about a sturdy 8 inch catadioptric rather than a modest collapsible refractor.

The alternative is to do one's observing from home, but higher up – i.e. through an upstairs window. We all know the problems with this of course – heat radiating from the house, light pollution from the surrounding residential area, and a very restricted field of view of course, depending on the size of your window. Nevertheless on balancing out the pros and cons we felt that, while we can always pack the telescope up and take it out for a trip if we want to, it would be useful and convenient to have an “observing station” at home as well.

To gain the greatest advantage of altitude and to maximise the field of view, not to mention avoiding the need to be continually moving furniture about, we thought it would be nice to set up the telescope in the loft and look through a skylight – preferably two skylights in fact, facing in opposite directions. A great idea in theory, only we didn't actually have any skylights – not even one.



Not being the kind to let mere facts stand in the way of a good theory, we started to do the whole catalogue-flicking, magazine-pouring thing over again, this time looking at windows rather than telescopes. They are of course generally intended just to let in light and air and to afford a bit of a view, and are not really designed so much to accommodate the practicalities of poking a telescope through the aperture and wagging it about to look at objects in the sky. However after much thought – and

careful counting of pennies – we found what we needed.

Basically it is a sophisticated sort of a Velux window, of a type we had never actually seen or even heard of until we started investigating. It comes in two halves, divided horizontally across the middle, and the fun part about it is that not only does the top half open out, but so does the bottom half – creating what is, in effect, a small viewing platform so that the telescope can stand further out from the roof line and get a much wider view from side to side. The major disadvantage of the design is that the top part of the window at its normal full extension only opens to an approximately horizontal position, more or less parallel with the ground, so that the open window itself then obstructs the view straight up into the sky or at high declinations. All is not lost however, since the window is designed so that it can also tilt backwards until it is pointing vertically

**Will heat from the house rising through the windows cause problems with turbulence ?**

**Will floor vibrations cause problems at high magnifications ?**

**Hopefully we will get an update in a future edition of SAGASoffLine**

### **A Loft Observatory (continued from previous page)**

straight up and down, affording an open vista before you (albeit a rather restricted space behind). Theoretically this particular feature was really meant to make the glass surface more accessible for cleaning, but never mind – it works!

So now we have our two skylights, one to the front and one to the rear, and a miniature observatory permanently installed in our loft with the telescope and also a moderately large pair of binoculars on a tripod ready for action whenever we get a clear night. Of course the “seeing” does suffer to some extent from the thermals coming off the house and from light pollution from the town centre nearby, as we expected, but still we are very pleased with the overall result. Earlier this



year in fact we managed to get a good view of Mercury, low in the sky after sunset, which from our location at the bottom of the hill would have been impossible from ground level. All we need now is for the cloud to clear away once in a while, and with any luck I just might achieve every astronomer’s dream, and be the first to spot the invasion fleet coming!

### **SAGAS Equipment for Loan to your Society**

SAGAS have purchased a set of Display Boards and a Moon Globe for use by member societies particularly at exhibitions or public events.

If you wish to borrow these please contact the (acting) Secretary via the contact email on the web site.

We are also considering the purchase of other items for the mutual use and therefore benefit of our members. One item under consideration is a Dark Sky Meter ( see the last page) and a large projection screen for use at large meetings and other public events.

Does your society have any other ideas or comments on these proposals let the committee know at the next meeting or by email.

John Murrell

**Do you need to borrow some display boards ?**

**SAGAS have a set to loan to your Society**

**IoW Star Party – only Red lights allowed**



Isle of Wight Star Party 2011



**See the dark skies of  
the Isle of Wight  
March 2011**

**SideByte**

**In addition to  
the nighttime  
observing the  
IoW Star Party  
have organized  
various  
activities  
during the day  
as well as  
lectures in  
case it's  
cloudy**

**IoW Star Party – even the sunny IoW sometimes has clouds**



**SAGAS - The Southern Area Group of Astronomical Societies**

See Contact Details on our website at [www.SAGASonLine.org.uk](http://www.SAGASonLine.org.uk)  
E-mail: [Newsletter11@SAGASonLine.org.uk](mailto:Newsletter11@SAGASonLine.org.uk)

**sharing the same sky**



**SAGAS – The Southern Area Group of Astronomical Societies** exists to allow astronomical societies to share their experiences both good and bad for the benefit of other societies, and their members. The quarterly business meetings also provide networking opportunities for committee members. More details are on the '15 benefits for £15' link on our website.

SAGAS also holds an annual Summer Meeting to encourage society members to meet and provide individual & group networking opportunities.

We are on the web @ : [www.SAGASonLine.org.uk](http://www.SAGASonLine.org.uk)

**SAGAS Dark Sky Meter**

SAGAS are considering purchasing a Dark Sky Meter to allow societies to measure how dark the sky is in various sites in their vicinity. The idea is that societies will be able to borrow the meter for a defined period in exchange for their measurements.

The resulting data will not only show where the good observing sites are in the South of England but will also give us valuable information to monitor the progress of light pollution be it good or bad over the years.

For this to work we need someone to co-ordinate the loan of the meter and also to collate the readings in a suitable database that will be accessible to all SAGAS member societies.

Are you or one of your members willing to take on this task ?

It could be split into two—managing the meter and sending it to the next society and collating the results.

Without a volunteer (or two) this project is unlikely to progress.

John Murrell



**Our Logo—please ensure it is prominent on your website and has a link to [SAGASonLine.org.uk](http://SAGASonLine.org.uk)—that way we both increase our search engine ratings.**

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