

NEWSLETTER

March - May 2018 Issue 182



Cardiff Astronomical Society: Observatory. @CardiffAS CAS has an excellent Observatory located in the grounds of the National Trust's Dyffryn Gardens

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A Change of Publications Officer at CAS

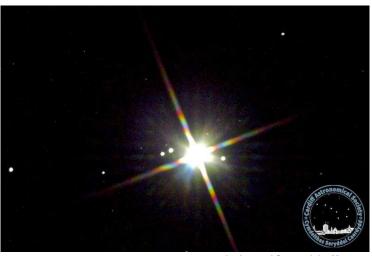
John Richards has stepped down from Publications Officer for CAS, after some years at the helm of publishing, I am sure all would like to thank John for his hard work during his term. Wishing John all the success in the future. John Richards Issue 168 to 180 September 2014 to December 2017. Why not follow John on Twitter? @johnniemojo

Where is the International Space Station?

In this newsletter, see if you can find the ISS space-station! look and pay attention to the small print. ISS will appear in all the future newsletters during it's deployment.

What is Your Favourite Planet?

Perhaps it is not a planet but a moon that you favour during your observing sessions. Do you take photos of our local planets and moons? We all enjoy seeing these. Surely it is awe inspiring when we share photos. Why not share your photos with the CAS newsletter? We will publish some photos and share them on *Twitter and FaceBook*. All in any case will go to the inbox of the CAS WebMaster. If you have a library of photos you may contact



Jupiter and Some of the Moons

CAS Member Photo

the WebMaster directly on the CAS web-site, to include your library along with other CAS members.

publications.officer@cardiff-astronomical-society.co.uk

CAS Star Party Event in early January 2018

Date: 19/01/2018

Location: Dyffryn Gardens Observatory

Weather: Temp was 5 C and wind 2-3mph

Observatory open 5:30pm and ended 9:15pm

Highlights: A little cloudy but there were some good views of Orion and Pleiades. Telescopes and binocular viewing were available for the visitors and one new member. The roof of CAS observatory was open with the deployment of the 11 inch Cassegrain telescope for all to use.

Cover Photo: In the observatory with CAS members. The roof is open with the CAS telescope is being deployed. Observing the night sky is a learned ability. Using the CAS 10x50 binoculars is the best way to start to observe. Ask a friend to join you learning with the night sky as a CAS member. membership.secretary@cardiff-astronomical-society.co.uk

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Photo above: taken at 20:13:04 GMT in the direction of Pleiades. Notice the security cameras in the foreground on the right. Centre view to South 191° Alt 59° approx. The star Aldebaran is showing in the lower left of the picture. Even with low cloud there are views and photos worth taking. Light pollution can be an issue. You can use filters to take out the offending light frequency or leave it in as shown here below.

Photo below: taken at 20:25:42 GMT from outside the observatory. In the direction of Orion with a small tree in the foreground. Centre view to South 161° Alt 34° approx. Low cloud is catching the light pollution shown in this photograph.



If you have not been to the Dyffryn Observatory, why not ask someone who has and also arrange a visit? Go to the CAS web site.

CAS Observing Session February 2018

Date: 09/02/2018

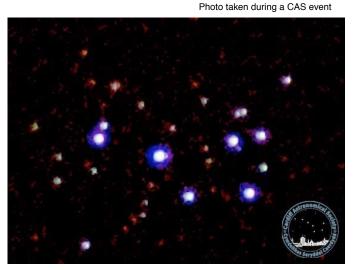
Location: Dyffryn Gardens Observatory

Weather: Temp was 5 C and wind 2-4mph

at first clear of cloud.

Visitors arrived just after 7:00pm.

They used binoculars to scour the night sky. Some were well prepared and quickly identified some obvious constellations. As it was still twilight, we all waited for darker skies which by around 8:00pm arrived. The CAS 12" Dobsonian GoTo telescope had by then been setup by to observe the galaxies.



One observer had with them a Cellestron telescope. This showed some interesting objects in the night sky. All were welcome to share the splendid views. as they marvelled at the night sky, with no Moon.

Bob directed the telescope to Andromeda. All there were treated with a clear view through the telescope, using a 40mm lens. The lens was changed to a 25mm one which gave a good view of the Beehive Galaxy, Orion Nebula and Pleiades. Other galaxies were visible as the GoTo worked very well. By about 10:10pm the session had ended and the telescopes are packed away.

On a cold winter's night, it can take a lot of effort to arrive to meet with like minded astronomers. But flasks of tea and coffee gave a cosy comfort. All left satisfied with the nights activitie's, very well stimulated with the evening's event. Q. how many stars in the Seven Sisters?

CAS Newsletter Formats

CAS newsletter publishing occurs four times a year. With information on society events, activities, reports, forthcoming astronomical events, and current phenomena. All CAS members may want to contribute. Send your material to the CAS publications officer by email. The newsletter is available online to members. A paper copy is available when requested if preferred. publications.officer@cardiff-astronomical-society.co.uk

CAS Newsletter Publication Dates

Members article are what create our CAS newsletter. We all say a 'big thank you' for all contributors to past issues. The CAS newsletter publishes at the first Society meeting of each quarter. The deadline for submissions is 4 weeks before the publication date. Your Newsletter Editor welcomes feedback, articles, photos and ideas for publication! Deadline 1st May 2018.

Future Newsletter Previews:

Follow the Comet Panstarrs (C/2017) K2

Digital Imaging of Meteors

Solar Viewing at Dyffryn Gardens

CAS Library Book Review

Stellarium Software Guides a Telescope



Add Cardiff Astronomy Society to your FaceBook

CAS on Facebook at http://www.facebook.com/CardiffAS



CAS on twitter, follow @CardiffAS

Members' Articles and Photographs

Get it down in print! Everyone has a story in them, so why not now pen yours? The Cardiff Astronomical Society is wanting articles for future editions of the newsletter. It can be on any aspect of astronomy, spaceflight or even science fiction. It needs to relate to some aspect of astronomy or cosmology. CAS members would love to engage with your articles. Your article can be between 250 - 1000 words per newsletter. So if you have a story to tell then feed it to the Editor.

Photo Images for Inclusion: write a few words and attach an image to your email. CAS would like your astrophotography and event photos. All images should be with the time and date of the shot. Other information may be added - giving location and event. *Unless stated all images in the newsletter are from CAS members*.

publications.officer@cardiff-astronomical-society.co.uk

The Joan Thomas Library

The Society has a new Librarian, Katrin Raynor-Evans. Members wishing to borrow or return items held by the Library then please

librarian@cardiff-astronomical-society.co.uk

A current book list is on the CAS website. Please check to see if you have any outstanding books to return. Do contact the Librarian to arrange a collection of any CAS library book.



CAS Talks Review

Date: 18/01/2018 7:30pm

Speaker: Paul Roche, Cardiff University

Gaia: the billion star surveyor

This presentation by Paul Roche, was a cram packed talk with information and videos from ESA. http://www.esa.int/Our_Activities/Space_Science/Gaia

The audience was very attentive to the enthusiastic presentation. Information presented using Microsoft's PowerPoint was very informative. The presentation included videos from the European Space Agency web-site about Gaia. The sense of the great significance and value of the Gaia mission was well conveyed by the speaker. The audience left with a greater understanding ESA's Gaia operation.

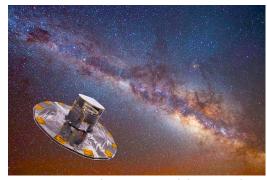


image courtesy website www.esa.int

A satisfying experience was had by all in attendance.

If you use an astronomy app on your phone: The paid app, 'Red Shift' can use Gaia's data set. This is for star location and information. Lively questions and answers followed the presentation. Paul gave all the opportunity to pick up a poster from the ESA showing the now orbiting Gaia satellite.

CAS Talks Review

Date: 01/02/2018 7:30pm

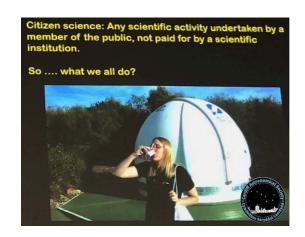
Speaker: Alice Shepherd University College,

London

Citizen Science

Alice went straight in and gave the audience a profile of herself! She has become a prosupporter of Citizen Scienceand has become an

advocate for the amateur astronomer to be part of the big, big scientific community.



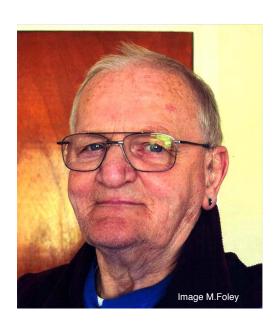
Alice showed amateur astronomers have had a very real part to play in science up to today! Just as did Friedrich Wilhelm Argelander born in 1799. By the time this man of 'citizen science' died at 75, he had become part of a publisher group for a star catalog between 1852 and 1859. This gave the positions and brightness of about 324,000 stars.

Alice's lively and informative lecture covered many aspects of astronomy today. Alice's favourite foundation of her professional life has been GalaxyZoo. Why not visit www.galaxyzoo.org or Tweet @galaxyzoo? Built on a very large foundation of science. Citizen Science belongs to everyone. It supports all aspects of scientific study and investigation of our universe today. The recent cataloging of 100.000.000 galaxies to be one project.

Mike Foley - SECRETARY TO CARDIFF ASTRONOMICAL SOCIETY 2017/18

Welcome to my first article for the Society, and where exactly should I begin? Many of you may or may not know that my interest in astronomy only began about 1997. At the time, I was employed by a well-known insurance company. Sometimes people would ask me what my job was, and I would say, that I was an Undertakers Apprentice, "that must be interesting they would say"! Yes, I would answer, 'I go around selling Life and Death Insurance Policies'. Then the penny would drop. But what brought me into this unexplored field of visual delights? The company I was employed by were going to change all its structure and operations, which at the end of the day, meant for me early retirement. My work colleagues and family, threw a retirement party for me, and asked what would I like as a retirement present, "Wow" I said, "a big telescope, which I can take up the Garth Mountain". My family paid for my first year's subscription to Cardiff Astronomical Society, then I purchased some books to help me understand what Astronomy might be about, and finally I bought my first Telescope, Meade ETX90 from a store in Birmingham, and eventually I bought an 8" Meade, through a former member of CAS, in the hope of seeing deeper into the dark sky.

So now here I am, Secretary to the Society, who would have thought that such a thing could happen, but happen it did. It's been a bit of a long road to get where I am today, because astronomy took second place in my working life. To cut a long story short, I qualified as a Trainer/ Assessor in life saving. A fully qualified life guard, A fully qualified swimming teacher and level two swimming coach. Previous to that I had also qualified in City & Guilds Photography. I became a member of the Royal Photographic Society, earning a distinction from them of LRPS, not bad considering I came out of school with nothing. [I have in this short space of time, photographed the Transit of Venus 2004, and Hale-Bop comet, solar and lunar eclipses].



My two main sources of interest are the Sun and the Moon, I like photographing them, and then manipulating the images through some of my printing techniques, as some of you will have seen and know if you have been to any of our special events. To be able to talk to members of the public and young people about my images, and to challenge them on their perceptions, of what they think or thought they saw, and then to make them aware, that there is a tremendous amount of activity going on out in space, where nothing is static, I think is amazing. I get very excited by the fact that people will stop and listen.

So, what do I want to see within the Society? A great attractive programme of speakers, which, for this season we have, thanks to Theresa and Kath: more members of the Society becoming involved with its development and progress an influx of helpers, for when we hold public events, e.g. National Museum of Wales, Duffryn Gardens, St. Fagans Castle, Brecon Beacons National Park, and Techniquest Science Centre for young people. The opportunities are there for all, and it's a great feeling to be involved.

So far, we have had a very good start to our evening talks, with Prof Patrick Sutton taking us down black holes and riding gravitational waves around them, Prof Jim Al-Khalili searching space, looking for signs of terrestrial life, and a very engaging talk from Prof Mike Disney, with

more exciting speakers to come.

Following on from the recent American Solar Eclipse, to which some of our members were privileged to experience first-hand, to which, the BBC gave scant coverage, I did think of a very challenging question? How many full Solar and Lunar eclipses have there been in the UK since 1941? I have started that little quest. All offers of help, would be welcome.

M Foley CAS Sec.

Unabridged Version 2017

Astronomy in Spain

A visit to the Griffon Observatory

I don't know if anyone has had a wish like mine of being able to do some observations and astrophotography in dark skies without having to endure sub zero temperatures using top notch equipment with expert astronomers on hand. The opportunity to realise that wish arose for me

last April when I was able to travel to the Griffon observatory in Spain.

The name of the observatory may seem familiar to many. This was the observatory partly setup by Andy Burns. If you remember, he came to talk to the society earlier this year about it. I thought it would be interesting to hear about it from an amateur's viewpoint. You may remember the observatory is based in the Grazalema National Park in southern Spain, which is about a 2 hour drive from Malaga airport,



directly accessible from Bristol Airport, so getting there was straightforward. Because it is in a national park and away from light pollution it has clear, dark skies, ideal for observing and astrophotography.

The main telescope in the dome is a 6" iStar refractor on an EQ8 mount. A quality of equipment I would never ordinarily have access to. Outside the dome are several mounts to allow use of the variety of other telescopes available. Andy has amassed an Aladdin's cave of equipment there, so there was no need to take anything. I was happy just to take my camera to attach onto the telescopes. He has a range of Refractors and Newtonions along with eyepieces, filters, binoculars, cameras, CCD imagers etc. I was let loose on the refractor in the dome one evening as well using the other refractors and mounts situated outside the dome other evenings. When I needed help and advice on the equipment or locating targets in the sky, Andy's expertise or the guys from Dark Sky Wales were always on hand to make sure the experience was rewarding and informative.

Because of the climate, even in a mountainous region, the sky was clearer for longer which allowed us to skywatch for 3 consecutive nights, giving us more time for observing and astrophotography. I am not used to so much skywatching in a short time so found it a little tiring, but if I wanted a night off that would have been fine. I wanted to maximise the experience so made as much as I could of the opportunity.

When I was there, Jupiter rose majestically each evening over the dome which was beautiful to view. Observing from 36 means the constellations are a little different to what I am used to but they, were still recognisable. We were there the wrong time of year to see Omega Centauri or a full view of Scorpius but they are visible from that latitude. I was able to take some simple images of constellations but having Andy and the guys from Dark Sky Wales on hand allowed me to see either objects I had not seen before or familiar objects in a clearer way. For example seeing the open cluster M35 through the iStar refractor was stunning. The stars shined like diamonds. On another evening, I put my DSLR onto another scope and Allan Trow of Dark Sky Wales pointed me in the direction of Virgo at what appeared to be a bland patch of

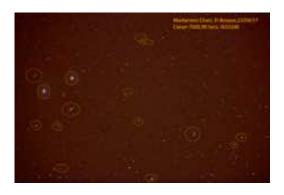
sky. Examining the photo revealed a string of galaxies called Markarians Chain. This isn't something I would have found without the expertise on hand. Also on the trip were a couple who were complete novices and Martin Griffiths gave them a tour of the night sky every night using binoculars and a Dobsonian. So no matter what level of expertise and knowledge, everyone was given an experience to remember.





The accommodation whilst there was in the village of El Bosque, a 5-10 minute drive from the observatory. It's a small village, untouched by mass tourism so there was very little English available, so if you have no Spanish it can be an adventure ordering food and shopping. We found Mr Google a helpful guide.

The village of El Bosque is very pretty and quiet, we were able to walk leisurely around its narrow streets and Andy took us to some of his favourite restaurants at meal times. Above the village is a botanical garden which I didn't have time to visit. It has one unusual resident too, a stork that has made its nest on top of a pylon near the village bullring. If you are lucky you will get to see Griffon Vultures flying overhead, sadly we didn't see any on our visit.



It wasn't all stargazing. Martin Griffiths, friend of the Society and part of Dark Sky Wales, took us for a day trip to the beautiful town of Ronda, a town about an hours drive away which lies about 100+metres above a canyon gorged out by the river Guadalevin. Alternatively Andy and Allan offered the opportunity to go back to the observatory to do some solar observing with the solar scopes.

Overall, I enjoyed the experience of observing at El Bosque, the observing, the company, the food and the visits. Dark Sky Wales run 2 trips out there each year in conjunction with Andy and if you want to visit contact Andy or the team at Dark Sky Wales to find out when the next trip is due. It's an experience you will enjoy.

CAS Astrophotography

Group Alan Stephens

The Cardiff Astronomical Society has an excellent observatory located in the grounds of the National Trust's Dyffryn Gardens, which is situated in St Nicholas just outside Cardiff on the A48 Cardiff to Cowbridge road. The observatory is sited where it is

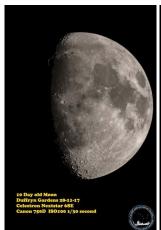
A few members of the Astrophotography Group



for a number of historical reasons and because of the dark skies offered in this rural setting.

The CAS Astrophotography Group meet here at Dyffryn each Tuesday evening and have 13 members at present. If the weather is unsuitable for photography the group use a small area of the Cory Centre to discuss the many areas and techniques of astrophotography or any new ideas or modifications which have been carried out on their own equipment which may benefit other members. observatory.manager@cardiff-astronomical-society.co.uk

Most members of the group bring their own telescopes tripods and imaging equipment as the Society does not own it own photographic cameras. The members can attach their own





dedicated cameras or DSLR (with the correct attachment) 11inch to the Celestron diameter telescope in the observatory.

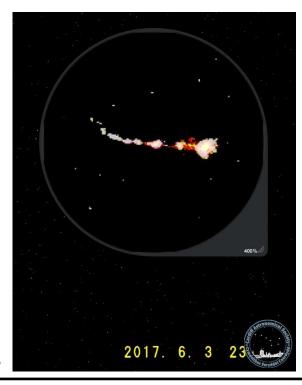
A few images which have been taken by our members.

Camera Images of Meteors

In a future issue of the CAS newsletter - we will talk through taking photos of meteors entering the Earth's atmosphere.

So many questions arise when you encounter meteors during your observing session. What elements do the colours on the tail of this image on the right represent? The meteor explodes and hangs in the sky and for how long? What ion exchange effects are initiated in the local atmosphere? Email the CAS newsletter editor to include your thoughts in the coming issues.

publications.officer@cardiff-astronomicalsociety.co.uk



CAS Member Photo

Up-Coming CAS Public Events - March to May

There are no public events booked for this time period. As soon as arrangements are finalised you will find the details on this page. Some of our events are organised at short notice. For further details of events we are organising, please regularly visit the CAS web site.

CAS Lectures

| 1st March 2018 | Mary Fairfax Somerville | Dr Allan Chapman, Oxford University |
|--------------------|--|---|
| 15th March 2018 | The Large Hadron Collider | Professor Maurizio Piai, Swansea University |
| 29th March 2018 | Broadband, Narrowband - from a city | Nick Hart, CAS |
| 12th April 2018 | The Ancient Egyptians and their Astronomy | Dr Pauline Norris, Independent Researcher of Egyptology |
| 26th April 2018 | CAS Annual General Meeting | |
| 10th May 2018 | Using nature to observe the Universe in X-rays | Professor Paul O'Brien, University of Leicester |
| 24th May 2018 | Mysteries of the Solar System | Dr Chris North, Cardiff University |

Our talks are hosted by the School of Physics and Astronomy

Cardiff University Queen's Buildings, The Parade, Cardiff CF24 3AA - All talks start at 7.30 p.m. and all attendees are kindly invited to sign the visitors' book upon arrival.

CAS Star Parties

The Society's Star Parties are held at our own Observatory in the grounds of Dyffryn Gardens. This event takes place what ever the weather.

Anyone interested in attending a Star Party should first contact Kath Compton

| The following dates are provisional | | | |
|-------------------------------------|--------|------------------|--------------------|
| 16th March 2018 | Friday | 20.00 - 22.00 | Dyffryn Gardens |
| 13th April 2018 | Friday | 21.00 - 22.00 | Dyffryn Gardens |

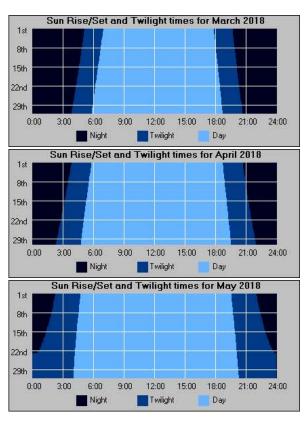
The Star Parties are aimed at beginners to astronomy of all ages. They consist of talks, demonstrations of the night sky in real time or on Stellarium and an introduction to the various types of telescopes. The Star Parties are ideal for our junior members and anyone else who wants to learn their way around the night sky. Each event will start with a general night sky tour. We concentrate on the brighter Messier objects, the Moon and bright planets.

There will be at least two (usually more) CAS members on duty. Don't forget it's YOUR society, so come along and have a good time!

Almanac March to May 2018 Sun Rise/Set & Twighlight

Compiled by:
Michael Boniface CAS

| Sun Ris | se / Set | & Twilig | ght | |
|---------|----------|----------|-------|-------|
| March | | | | |
| 1st | 06:58 | 17:51 | 05:07 | 19:42 |
| 8th | 06:43 | 18:03 | 04:52 | 19:54 |
| 15th | 06:27 | 18:15 | 04:35 | 20:08 |
| 22nd | 06:11 | 18:27 | 04:17 | 20:21 |
| 29th | 05:55 | 18:39 | 03:58 | 20:36 |
| April | | | | |
| 1st | 05:48 | 18:44 | 03:50 | 20:42 |
| 8th | 05:33 | 18:56 | 03:30 | 20:58 |
| 15th | 05:17 | 19:07 | 03:09 | 21:16 |
| 22nd | 05:03 | 19:19 | 02:47 | 21:35 |
| 29th | 04:49 | 19:31 | 02:23 | 21:56 |
| May | | | | |
| 1st | 04:45 | 19:34 | 02:16 | 22:02 |
| 8th | 04:32 | 19:45 | 01:50 | 22:27 |
| 15th | 04:21 | 19:56 | 01:20 | 22:57 |
| 22nd | 04:11 | 20:06 | 00:32 | 23:46 |
| 29th | 04:04 | 20:15 | : | : |



Meteor Showers

Meteor Showers Report for 3/ 1/2018 to 5/31/2018

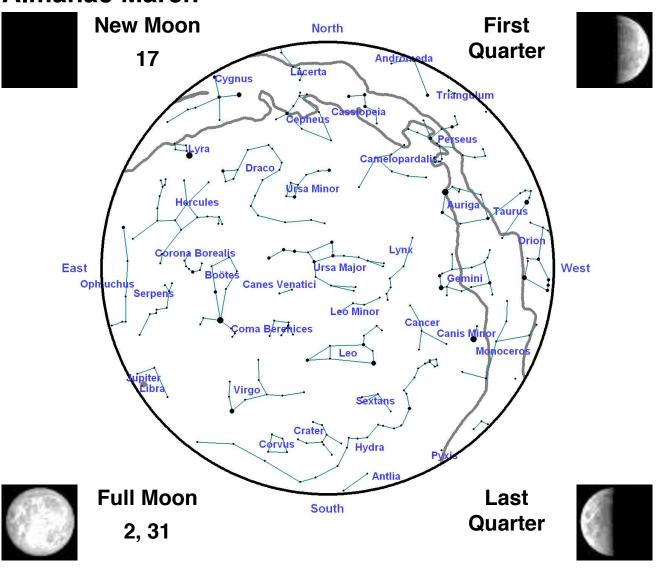
| Date | Meteor Shower | ZHR | RA | DEC | Illum. | Longitude |
|-----------|-----------------|-----|--------|------|--------|-----------|
| 4/12/2018 | Virginids | 5 | 14h04m | -9∞ | 0.17 | 22∞ |
| 4/23/2018 | Lyrids | 12 | 18h08m | 32∞ | 0.51 | 33∞ |
| 4/29/2018 | alpha-Scorpiids | 5 | 16h32m | -24∞ | 0.99 | 38∞ |
| 5/06/2018 | eta-Aquarids | 35 | 22h20m | -1∞ | 0.69 | 45∞ |
| 5/13/2018 | alpha-Scorpiids | 5 | 16h04m | -24∞ | 0.08 | 52∞ |

CAS Observers' Session March to May 2018

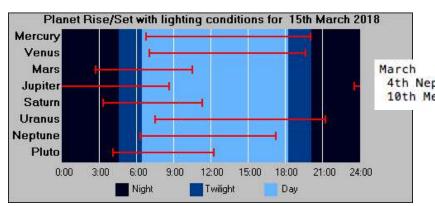
CAS members welcome. Come and see the wonders of the Universe through our telescopes and knowledgeable talk to astronomers. It's a whole new experience just waiting for you to enjoy! The dates of the planned sessions published on the web site of CAS. This event is weather dependent. Check by visiting CAS web site.

| 16th or 17th March | Friday or Saturday | 20;00 - 00:00 | Dyffryn Gardens |
|--------------------------|--------------------|---------------|--------------------|
| 23rd or 24th March | Friday or Saturday | 20:00 - 00:00 | Dyffryn Gardens |
| 13th or 14th April | Friday or Saturday | 20:30 - 00:00 | Dyffryn Gardens |
| 20th or 21st April | Friday or Saturday | 20:30 - 00:00 | Dyffryn Gardens |
| 11th or 12th May | Friday or Saturday | 21:00 - 00:00 | Dyfryn Gardens |

Almanac March



| Constellation | R.A. | Dec | Rises | Sets | Mag. |
|---------------|---|---|--|--|--|
| Pisces | 00h43m18s | +06∞49'29" | 06:45 | 20:00 | -0.3 |
| Pisces | 00h38m16s | +02∞57'30" | 07:00 | 19:35 | -3.9 |
| Sagittarius | 17h53m14s | -23∞23'26" | 02:41 | 10:26 | +0.6 |
| Libra | 15h24m26s | -17∞23'14" | 23:31 | 08:36 | -2.3 |
| Sagittarius | 18h35m28s | -22∞18'18" | 03:16 | 11:15 | +0.5 |
| Pisces | 01h39m25s | +09~45'15" | 07:26 | 21:11 | +5.9 |
| Aquarius | 23h10m18s | -06∞22'22" | 06:19 | 17:20 | +8.0 |
| Sagittarius | 19h35m40s | -21∞48'08" | 04:13 | 12:19 | +14.3 |
| | Pisces Pisces Sagittarius Libra Sagittarius Pisces Aquarius | Pisces 00h43m18s Pisces 00h38m16s Sagittarius 17h53m14s Libra 15h24m26s Sagittarius 18h35m28s Pisces 01h39m25s Aquarius 23h10m18s | Pisces 00h43m18s +06∞49'29" Pisces 00h38m16s +02∞57'30" Sagittarius 17h53m14s -23∞23'26" Libra 15h24m26s -17∞23'14" Sagittarius 18h35m28s -22∞18'18" Pisces 01h39m25s +09∞45'15" Aquarius 23h10m18s -06∞22'22" | Pisces 00h43m18s +06∞49'29" 06:45 Pisces 00h38m16s +02∞57'30" 07:00 Sagittarius 17h53m14s -23∞23'26" 02:41 Libra 15h24m26s -17∞23'14" 23:31 Sagittarius 18h35m28s -22∞18'18" 03:16 Pisces 01h39m25s +09∞45'15" 07:26 Aquarius 23h10m18s -06∞22'22" 06:19 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ |

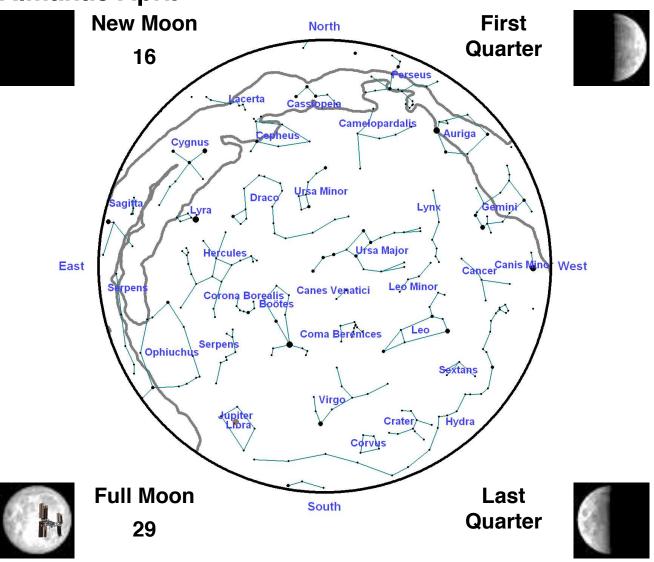


Planet Events

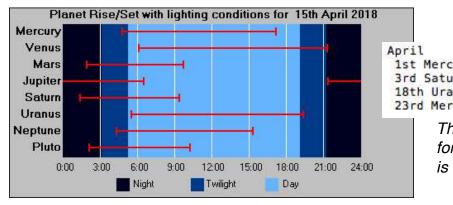
4th Neptune at Conjunction 10th Mercury at Perihelion (0.31 A.U.)

The data presented here is for the 15th, positional data is at 00:00 GMT/UT

Almanac April



| April | | | | | | |
|---------|---------------|-----------|------------|-------|-------|-------|
| desire. | Constellation | R.A. | Dec | Rises | Sets | Mag. |
| Mercury | Pisces | 00h18m20s | +01∞27'29" | 04:46 | 17:06 | +1.7 |
| Venus | Aries | 03h02m41s | +17∞21'42" | 06:04 | 21:15 | -3.9 |
| Mars | Sagittarius | 19h07m48s | -23×15'58" | 01:53 | 09:39 | +0.0 |
| Jupiter | Libra | 15h16m34s | -16∞50'09" | 21:18 | 06:29 | -2.4 |
| Saturn | Sagittarius | 18h39m29s | -22×14'15" | 01:18 | 09:18 | +0.4 |
| Uranus | Pisces | 01h45m51s | +10∞22'11" | 05:27 | 19:19 | +5.9 |
| Neptune | Aquarius | 23h10m26s | -06∞21'30" | 04:17 | 15:19 | +8.0 |
| Pluto | Sagittarius | 19h35m46s | -21∞48'00" | 02:11 | 10:17 | +14.3 |
| | | | | | | |



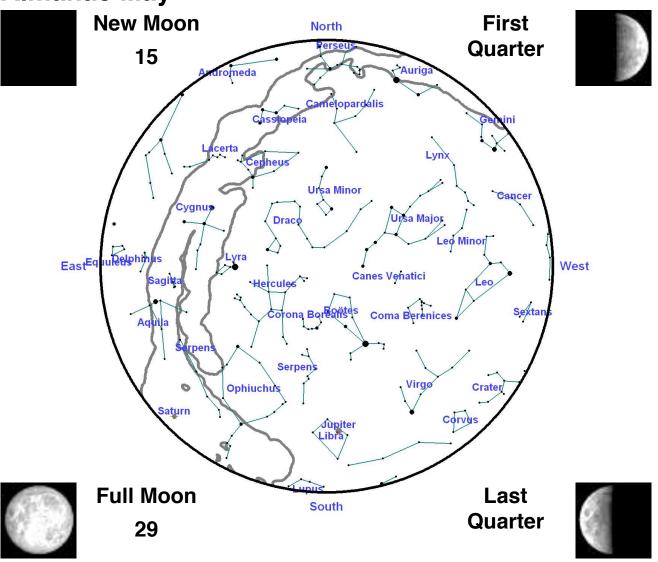
Planet Events

1st Mercury at Inferior Conjunction 3rd Saturn at Aphelion (10.0 A.U.) 18th Uranus at Conjunction 23rd Mercury at Aphelion (0.47 A.U.)

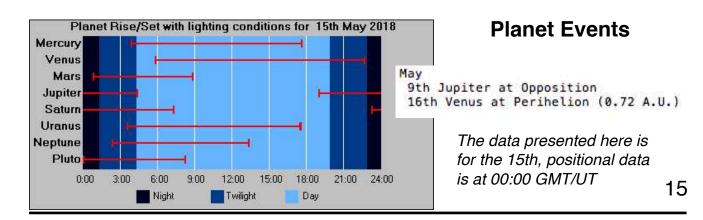
The data presented here is for the 15th, positional data is at 00:00 GMT/UT

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Almanac May



| May | | | | | | |
|---------|---------------|-----------|------------|-------|-------|-------|
| | Constellation | R.A. | Dec | Rises | Sets | Mag. |
| Mercury | Pisces | 02h04m05s | +09∞49'08" | 03:50 | 17:36 | -0.2 |
| Venus | Taurus | 05h35m58s | +24∞44'31" | 05:49 | 22:40 | -4.0 |
| Mars | Capricornus | 20h08m28s | -22×08'14" | 00:48 | 08:49 | -0.7 |
| Jupiter | Libra | 15h02m03s | -15~52'28" | 19:00 | 04:22 | -2.5 |
| Saturn | Sagittarius | 18h37m03s | -22×16'26" | 23:14 | 07:17 | +0.3 |
| Uranus | Aries | 01h52m16s | +10~58'00" | 03:32 | 17:30 | +5.9 |
| Neptune | Aquarius | 23h10m35s | -06∞20'37" | 02:19 | 13:21 | +8.0 |
| Pluto | Sagittarius | 19h35m52s | -21∞47'53" | 00:13 | 08:19 | +14.3 |



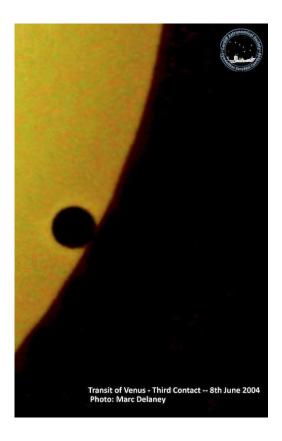
Solar Viewing With CAS

On most Saturdays (usually from 10.30 a.m. until about 1.00 p.m.) several Society members visit the observatory to carry out maintenance tasks etc. If the weather is suitable, they may make available to visitors to the observatory - whether Society members or not - telescopes suitable for viewing the Sun IN A SAFE MANNER.

N.B. NEVER LOOK DIRECTLY AT THE SUN WITHOUT HAVING SUITABLE EYE PROTECTION -PERMANENT AND IRREVERSIBLE EYE DAMAGE MAY RESULT

Also, the Sun should never be observed with any optical apparatus that has not been fitted with a purposely manufactured solar filter.

The Society has several telescopes fitted with solar filters including our large Celestron 11-inch telescope.



Activity on the Sun

Eruptive events on our nearest star can be wildly different. Some come with a solar flare, some with an additional ejection of solar material called a coronal mass ejection (CME), some with complex moving structures in association with changes in magnetic field lines that loop up into the Sun's atmosphere, the corona. Photo: CAS Marc Delaney Transit of Venus, 8th June 2004

Astrophotography with CAS

In view of a large number of inquiries received from Society members about organised astrophotography sessions, the Society has created an Astrophotography Group for interested members. It meets at the Society's own observatory on a Tuesday evening. Any member who is interested in joining the group should contact Alan Stephens. Visit (CAS Astro Photography Group) on FaceBook.

observatory.manager@cardiff-astronomical-society.co.uk

Visit CAS on the web

As a CAS member we can use the Members' Area of the web site. You will need a password to access this area. Contact the Chairman to obtain the password.

chairman@cardiff-astronomical-society.co.uk

Your Contact Details

Have you changed your email address or other contact details recently? If so, you could be missing out on receiving important society information. Please keep us up to date with any changes. Send your revised details to either our Membership Secretary