# Wiltshire Astronomical Society

# WAS News

December 2025


## Christmas Quiz

There will be no speaker for this month. Unfortunately, we will also be unable to provide Zoom for the remote members. However, normal service will resume in January.

To add some festive fun we will have a quiz, there is no pressure to get all the answers correct! As well as astronomy/space related questions, there will be general knowledge and trivia thrown in.

Just enjoy it.....

If time allows we may be able to have a forum where you can ask questions and hopefully other members wil be able to answer or assist.

### Inside this issue



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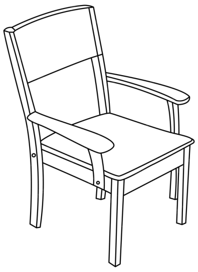


# Report from the Chair

As winter is upon us we all hope for clear skies. Among the rain there have been some cold and relatively cloudless nights. I hope you have been able to break out your telescopes!

I know the astrophotographers among the membership have been active and I include some of their work in the gallery pages.

Finally, Chris's efforts in getting together an observing session finally paid off! We always get good attendance for these sessions. You can see his report from the last evening session on page 6.

On the evening of 20 November, members Chris Brooks, Tracey Kelly, Martin Bush and myself visited the Corsham Pound Arts Centre for *Lintott's and Pretty's Universe of Music*. The event brought together Chris Lintott of *The Sky at Night* and musician Steven Pretty (of Hackney Colliery Band fame), who demonstrated how astronomy and music can intertwine in unexpected ways — including turning the orbital spacing of an exoplanet system into a sequence of musical tones. The evening was engaging, light-hearted, and driven by the warm rapport between the two presenters.

We also took the opportunity to have a small table with a poster and A5 cards to advertise the Society.

This month due to lack of time and other intervening matters there will no Beginners Page.

At the December meeting you will notice Sam is absent due to work commitments. This, once again, brings into focus that we need more assistance to help with the running of the Society. We therefore are looking for volunteers to assist and back up the existing volunteers/committee. If for any reason we find ourselves in the situation where two key people are unable to attend the monthly meeting, we may have a problem and therefore we need back up. Please, seriously consider offering your time (not so much) to ensure continued enjoyment by all of what the society offers to you. Thank you.

Tis the season to be jolly! (apparently..) Christmas is just approaching and I hope you all have a lovely time with family and friends. Perhaps Santa will bring some astronomy related gifts? If they are telescopic and need help with them, bring them along to the January observing session where I'm sure there will be others more than will to help you.

Next month we resume as normal with guest speaker Terry Ransome.

Thank you to you all for your support of the recommencment of hall meetings with supplementary Zoom for those remote or simply unable to attend. I have been pleased with attendance and increasing membership. I believe the hall meetings allow members to interact better and to learn from each other. Although we have had teething problems with the Zoom, we are getting better.

Merry Christmas to all! And a very special thank you to Sam, Chris and Tracey for their efforts this year to get the Society moving in a good direction.

Clear Skies! *Simon*

Steven Pretty and Chris Lintott

British Astronomical Association

Since the beginning the BAA has encouraged amateurs to make scientifically valuable observations, often in collaboration with professional colleagues.

In the twentieth century, this spirit of scientific observation of the night sky was championed by George Alcock, who discovered five comets and five novae using nothing more than a pair of binoculars.

Today, that tradition lives on in the BAA. Among our members are Tom Boles, who has discovered more than 150 supernovae from his observatory in Suffolk, and Damian Peach who produces some of the best planetary images in the world. Amateurs using imaging equipment have also detected fireballs on Jupiter caused by small asteroids or comets entering its atmosphere. It is staggering how technological developments in recent times now allow amateurs to produce better quality images than captured by professional telescopes just a few decades ago; the BAA Picture of the Week is testament to this.

Whether taking first steps in the hobby, or resuming after a break, it can be daunting knowing where to get sound advice. To help, we host Back to Basics workshops and publish tutorials online to enable members to hone their observing skills and get the most out of their kit. Meaningful results and inspiring images can be obtained with surprisingly modest equipment. The BAA Forum allows members to learn from one another and share experiences and results. At the core of our mission are our Observing Sections, run by experts who are on hand to provide guidance on various branches of astronomy.

For those who enjoy the challenges of scientific methodology and research, the BAA continues to help push the boundaries forwards of our understanding of the Universe. Spectroscopy is one such area. In 2016 we launched a new initiative to support budding spectroscopists. We now have a lively and highly productive spectroscopy community. A spectroscopy database to archive their observations has been developed with members contributing from the UK, Europe, North America and Australia.

# December 2025 Skywatching Guide

## Planetary Highlights

| | |
|---|---|
| Mercury (Morning Sky) | Greatest western elongation on Dec 7. Best chance to spot Mercury low in the eastern dawn sky. |
| Jupiter (Evening Sky) | Brilliant at magnitude –2.6. On Dec 7, the Moon passes close to Jupiter in Gemini — a striking conjunction visible after sunset. Visible all night. |
| Saturn (Evening Sky) | Low in the southwest after sunset. Rings remain edge on. Magnitude +1.1 |
| Uranus (Evening Sky) | Visible in Taurus at magnitude +5.6 |
| Neptine (Evening Sky) | Visible in Pisces magnitude +7.9 |
| Venus (Evening Sky) | Shifts into Sagittarius on Dec 20, dazzling as the “Evening Star” in the southwest twilight. Magnitude –4 |
| Sun | Crosses into Sagittarius on Dec 16. The Winter Solstice occurs Dec 21, marking the longest night of the year. |

## Lunar Events

| | |
|---|---|
| Dec 4–5: | Full Cold Moon — a supermoon, appearing larger and brighter than usual. |
| Dec 10: | The Moon occults Regulus (Leo’s brightest star), visible in early morning. |
| Dec 20: | New Moon — ideal for deep-sky observing. |
| Dec 24: | Another supermoon coincides with Christmas Eve, a festive spectacle. |

## Meteor Showers

Geminids (Dec 13–14): Peak rates up to 120 meteors/hour. Radiant near Castor in Gemini rises high by late evening. Best shower of the year.

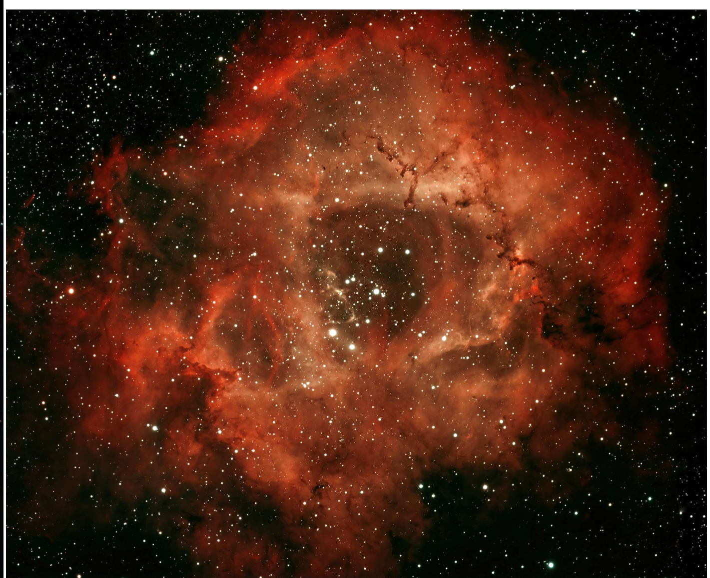
Ursids (Dec 22): Modest (up to 10 meteors/hour), but well-timed just after the solstice. Radiant near Ursa Minor.

Some lunar terminator images from Andy Burns. taken on 28th November.

# Gallery Pages

29 Hours on M81 galaxy with Holmberg IX satellite Galaxy. Matthew Terrell.

Cats Eye Nebula. Steve Allen



Rosette Nebula. Steve Allem

M45 The Pleiades.  Steve Allen

The Double Cluster ngc884 and 869. Andy Burns

M1 Crab Nebula using Seestar S50.  Andy Burns

# Report from WAS Observing Session

Chris Brooks 21/11/2025 19:00 to 21:00.

I said it was going to be a bit touch and go when the on/off email went out to say the observing evening was on, and the cloud gods once again did not disappoint! We just had a few good nights of lovely clear skies, but tonight we were met with about 60 percent low cloud at around 7pm combined, with a higher-cloud layers, meaning it wasn't truly clear and would mean, only brighter objects would likely be seen.

However, that did not stop a good bunch of people turning up and despite some debate as to whether it was worth setting up telescopes, I decided to go for it.

Although I had my 5" refractor on an EQ5 in the car, I went with my little WO GT81 on my iOptron Smart AZ mount as it would be easier to find fainter objects with the goto function.

There were a few who were asking how an equatorial mount should be set up so I helped demonstrate this on the most basic level, i.e. setting it level, polar axis pointed in the correct plane, with the correct azimuth setting and the importance of balancing the scope in both axis.

Personally, I would always recommend a good pair of 8x40 or 10x50 binoculars for those new to stargazing rather than buying a telescope (particularly an equatorial mount type). But if you are going to buy one get a simple Alt-Azimuth (AZ) mounted scope such as a Dobsonian as these are very simple to operate and need no real setting up, except maybe aligning the finder if it has one.

I think in all there were probably around 15-20 people out, including a couple of children so a good response. Along with my refractor, we had a few reflectors and a number of smart scopes for those without equipment to see and look through.

I set my mount up and set it to look at Saturn. The GT81 does not have a long focal length so magnifying by any great amount was limited but my Hyperion 8-24 zoom eyepiece showed a clear disk and a whisper of the almost edge on rings. People are always happy to see Saturn!

We then took in the Pleiades which although was a little washed out due to high cloud, shone through nicely in the eyepiece.

The good thing about the zoom eyepiece is that you can go from planetary size objects to wide field objects rapidly without having to bring a large number of separate eyepieces. Of course, zoom eyepieces are often not as bright and also lose some ability to split objects.

This led me to take a look at Albireo, the "second" (or is it the 4th) brightest star in the constellation of Cynus (β Cygni), a striking double star on the count of the colour difference between the pair. The GT81 was able to split them easily and the colour difference was very clear with the main star, Albireo A, being a deep yellow-orange and the companion (Albireo B) a crisp blue hue.

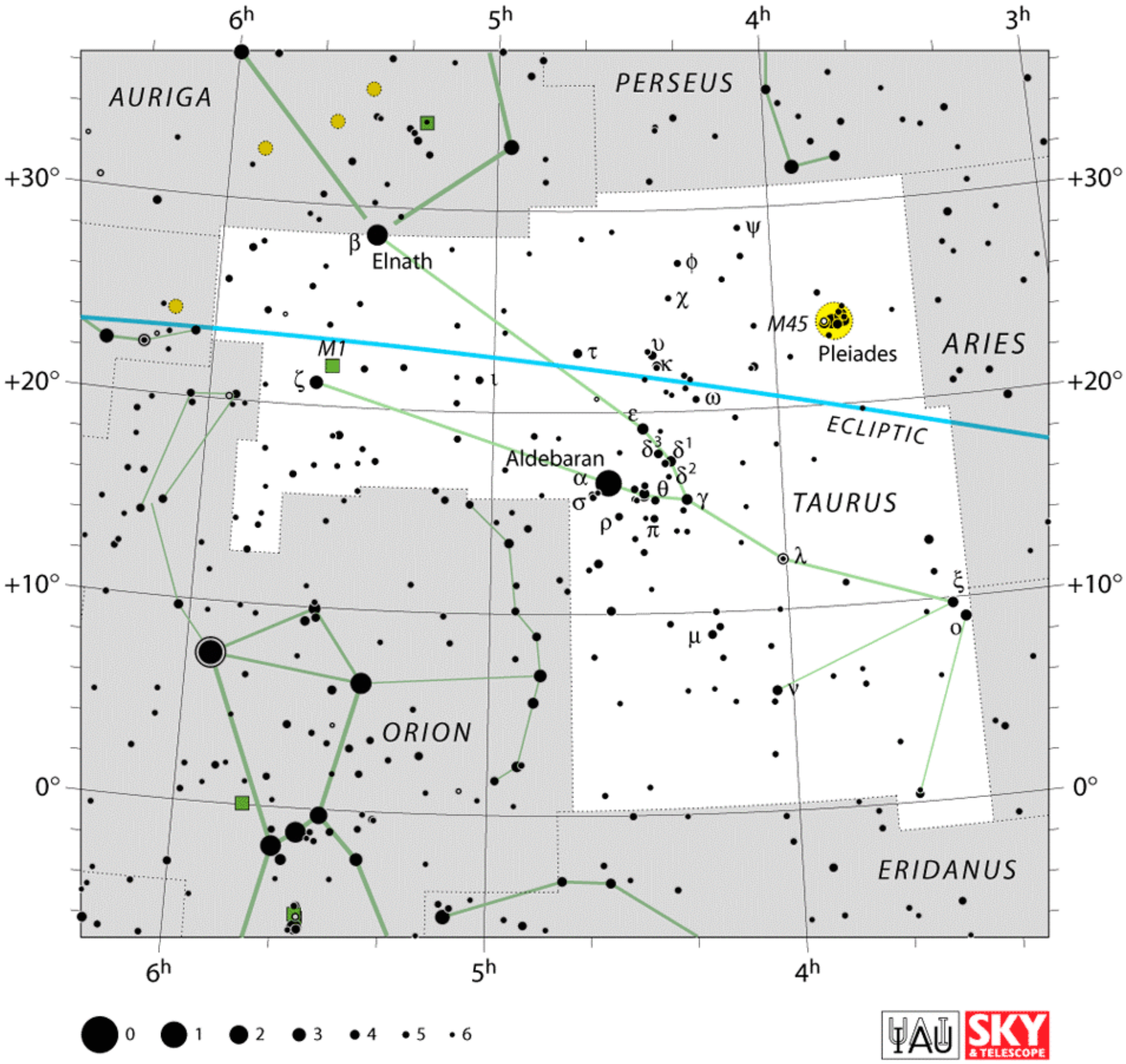
As some of the clouds parted we took a look at M31, the Andromeda Galaxy. As is normal, the 'hot' centre of the galaxy could be clearly seen but the lanes, which can often be seen on clear nights, were not present on this occasion.

Finally, we tried to find a M50 in Monoceros, which is another star cluster but which was a little subdued in the murky skies.

I personally was waiting to see Jupiter as it rose in the east just under Castor and Pollux in Gemini. However, the clouds were starting to get thicker and the seeing much more difficult, so people were starting to call it a night. I and a couple of others hung around for a little bit longer but as a thick bank of cloud headed our way from the north, we decided that was enough too.

As we had not had an observing session for quite a while it was certainly worth going ahead with the evening as it was rewarding, but let's hope the next observing night is a clear one.

# Constellation Focus — Taurus



# Taurus

is a large constellation in the northern sky. Its name means “bull” in Latin. The constellation is symbolized by the bull’s head. It is one of the oldest constellations. Its history dates back to the Bronze Age.

Taurus is one of the 12 constellations of the zodiac, first catalogued by the Greek astronomer Claudius Ptolemy in the 2nd century CE. In Greek mythology, the constellation is associated with Zeus, who transformed himself into a bull to get close to Europa and abduct her.

Taurus is known for its bright stars Aldebaran, Elnath, and Alcyone, as well as for the variable star T Tauri. The constellation is also home to the Pleiades (Messier 45), also known as the Seven Sisters, and the Hyades, the two nearest open star clusters to Earth.

Taurus has a number of other well-known deep sky objects. These include the supernova remnants Messier 1 (the Crab Nebula) and Simeis 147 (the Spaghetti Nebula), Hind’s Variable Nebula (NGC 1555), the colliding galaxies NGC 1410 and NGC 1409, the Crystal Ball Nebula (NGC 1514), and the Merope Nebula (NGC 1435).

Taurus is the 17th largest constellation in the sky, occupying an area of 797 square degrees. It is one of the 15 equatorial constellations. It is located in the first quadrant of the northern hemisphere (NQ1) and can be seen at latitudes between +90° and -65°. The neighboring constellations are Aries, Auriga, Cetus, Eridanus, Gemini, Orion and Perseus.

The genitive form of Taurus, used in star names, is Tauri. The three-letter abbreviation, adopted by the International Astronomical Union (IAU) in 1922, is Tau.

## Deep sky objects in Taurus

### Crab Nebula – Messier 1 (M1, NGC 1952)

Messier 1 is a supernova remnant in Taurus. It is also a pulsar wind nebula, or plerion, which is to say a nebula that is powered by the pulsar wind of a pulsar, usually found within shells of supernova remnants. A pulsar, or pulsating star, is an exceptionally magnetized rotating neutron star that emits a beam of electromagnetic radiation.

Messier 1 was discovered by the English doctor and astronomer John Bevis in 1731. It was the first astronomical object to be entered in Messier’s catalogue in 1758.

The nebula is believed to be the remnant of a supernova documented by Chinese, Japanese and Arab astronomers in 1054. Messier 1 was the first deep sky object that was linked to a historical supernova event.

The Crab Nebula has an apparent magnitude of 8.4 and is approximately 6,500 light years distant from the Sun. It is about 11 light years in diameter and expanding at the rate of 1,500 km per second.

The neutron star at the centre of the nebula is known as the Crab Pulsar. The Crab Pulsar is a young neutron star, a remnant of the supernova SN 1054, first identified in 1968. It emits pulses of radiation ranging from gamma rays to radio waves that rotate 30.2 times each second.

M1 image taken by Andy Burns using Seestar 50

## The Pleiades (Seven Sisters) – Messier 45

Messier 45 is an open star cluster in Taurus. It consists mostly of hot, luminous B-class stars most of which have formed in the last 100 million years. It is the best known cluster in the sky, and the easiest one to find, mainly because of its proximity and brightness.

The Pleiades cluster has an apparent magnitude of 1.6 and is 110 arc minutes in size. Its member stars are between 390 and 460 light years distant from the solar system.

The cluster will exist for another 250 million years or so, and then gravitational interactions with nearby objects will cause the stars to disperse. The stars are physically related and they all share the same proper motion.

The nine brightest stars in the cluster were named after the Pleiades – the Seven Sisters in Greek mythology – Alcyone, Celaeno, Electra, Maia (mother of the god Hermes), Merope (wife of Sisyphus), Sterope, Taygeta – and their parents, the sea nymph Pleione and the titan Atlas.

In Greek mythology, once Atlas was forced to carry the heavens, Orion started to pursue his daughters. To protect them from his advances, Zeus first transformed the seven sisters into doves and then, to comfort their father, into stars. It is said that the constellation Orion still pursues the Pleiades across the sky.

The cluster is known in many different cultures and the earliest depiction of the cluster dates back to the Bronze Age.

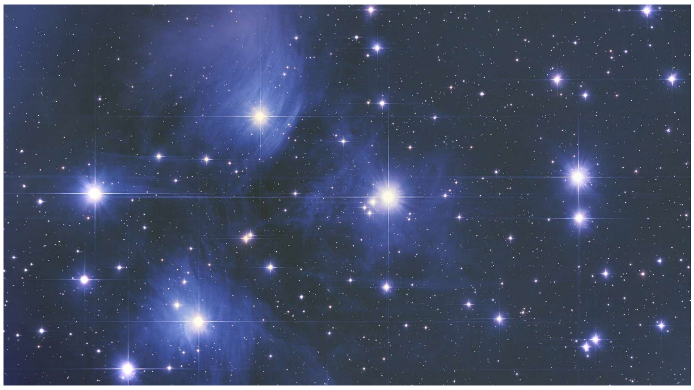


Image: Matthew Terrell

## Crystal Ball Nebula – NGC 1514

NGC 1514 is a large planetary nebula in Taurus. It was first discovered by William Herschel in November 1790.  The nebula is believed to be surrounding a close binary star with an orbital period of up to 10 days.NGC 1514 has an  apparent magnitude of 9.43.


Crystal Ball Nebula NGC 1514

### The Hyades Cluster (Caldwell 41, Melotte 25, Collinder 50)

The Hyades is an open cluster that contains hundreds of stars that share the same motion through space, origin, age, and chemical content. It is the nearest open star cluster to the Sun, and consequently the most studied one, too. Its estimated age is about 625 million years.  The brightest stars in the Hyades cluster and Aldebaran, the brightest star in Taurus, form a V shape. Aldebaran is not a member of the cluster, but lies in the same line of sight. It is much closer to us than the Hyades. The four brightest stars in the cluster – Gamma, Delta, Epsilon and Theta Tauri – are red giants and they all lie within a few light years of each other. They form an asterism that represents the bull's head.

# 2025—2026 Observing Schedule

| Wiltshire Astronomical Society Planned Observing Evenings 2025-2026 Season | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Month** | **Day** | **Date** | **Month** | **Year** | | **Event Attempt** | **Time** |
| Sep-25 | **Friday** | **19th** | **September** | **2025** | | **1st Observing** | **20:30** |
| | What To See! | Saturn close to opposition and very bright. Rings almost Edge on. | | | | | |
| | | Neptune almost at opposition and a good time to try to see it. | | | | | |
| | **Friday** | **26th** | **September** | **2025** | | **2nd Observing** | **20:30** |
| | What To See! | Still a good time to catch Saturn & Neptune | | | | | |
| Oct-25 | **Friday** | **17th** | **October** | **2025** | | **1st Observing** | **20:00** |
| | What To See! | Orionid Metereor Shower | | | | | |
| | **Friday** | **24th** | **October** | **2025** | | **2nd Observing** | **20:00** |
| | What To See! | Orionid Meteor Shower | | | | | |
| Nov-25 | **Friday** | **14th** | **November** | **2025** | | **1st Observing** | **19:30** |
| | What To See! | Leonid Metereor Shower | | | | | |
| | | Saturns Rings almost Edge on | | | | | |
| | **Friday** | **21st** | **November** | **2025** | | **2nd Observing** | **19:30** |
| | What To See! | Saturns Rings almost Edge on | | | | | |
| | | Uranus at Opposition just south of the Pleiades | | | | | |
| | | Leonid Meteor Shower | | | | | |
| Dec-25 | **Friday** | **12th** | **December** | **2025** | | **1st Observing** | **19:00** |
| | What To See! | Orionid Metereor Shower | | | | | |
| | **Friday** | **19th** | **December** | **2025** | | **2nd Observing** | **19:00** |
| | What To See! | Ursid Meteor Shower | | | | | |
| Jan-26 | **Friday** | **9th** | **January** | **2026** | | **1st Observing** | **19:00** |
| | What To See! | Jupiter at Opposition in Gemini | | | | | |
| | | Comet 24P/Schaumasse obsevable after 01:30 (10th) | | | | | |
| | **Friday** | **16th** | **January** | **2026** | | **2nd Observing** | **19:00** |
| | What To See! | Jupiter and Saturn still on display. | | | | | |
| Feb-26 | **Friday** | **13th** | **February** | **2026** | | **1st Observing** | **19:30** |
| | **Friday** | **20th** | **February** | **2026** | | **2nd Observing** | **19:30** |
| Mar-26 | **Friday** | **13th** | **March** | **2026** | | **1st Observing** | **20:00** |
| | **Friday** | **20th** | **March** | **2026** | | **2nd Observing** | **20:00** |
| Apr-26 | **Friday** | **10th** | **April** | **2026** | | **1st Observing** | **20:00** |
| | **Friday** | **17th** | **April** | **2026** | | **2nd Observing** | **20:30** |
| | What To See! | Lyrid Meteor Shower | | | | | |
| May-26 | **Friday** | **8th** | **May** | **2026** | | **1st Observing** | **21:00** |
| | What To See! | Eta Aquarids Meteor Shower | | | | | |
| | **Friday** | **15th** | **May** | **2026** | | **2nd Observing** | **21:00** |

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# Wiltshire AS Meeting overview 2025/26

**All meetings convene from 19.15 for a 19.30 start**

| MONTH | TITLE | Speaker | ACTUAL DATE |
|---|---|---|---|
| Sep-25 | Adventures in Infrared | Dr Jane Clark | 2nd September 2025 |
| Oct-25 | The Colourful Lives of Stars - What are stars? | Michael Barratt FRAS | 7th October 2025 |
| Nov-25 | Black Holes, Dark Matter and Dark Energy | Peter Allan | 4th November 2025 |
| Dec-25 | Christmas Quiz | N/A | 2nd December 2025 |
| Jan-26 | Filton in Space - 65 years and Counting | Terry Ransome | 6th January 2026 |
| Feb-26 | John Dartnell | Capturing Totality: Tips and Techniques | 3rd February 2026 |
| Mar-26 | Observing with Binoculars | Mark Radice | 3rd March 2026 |
| Apr-26 | Extinct Constellations | Nicky Fleet | 7th April 2026 |
| May-26 | ~~Can Life Exist in the Icy Moons of Our Solar System?~~ | ~~Bernard Henin~~ | 5th May 2026 |
| Jun-26 | Members Talks & AGM | Various | 2nd June 2026 |
| | | | |
| Jun-26 | Norman Lockyer Observa-tory, Sidmouth | Society Trip | Awaiting Actual Date (Saturday?) |
| | | | |

# Wiltshire Astronomical Society Contact Info:

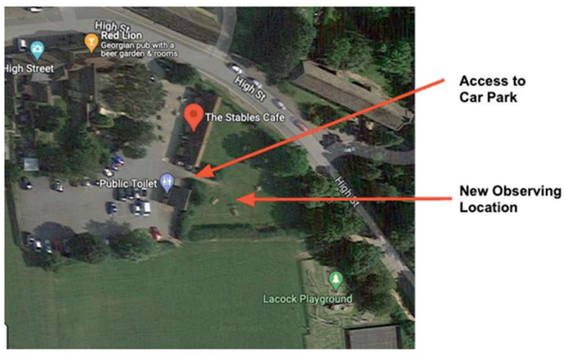
| | |
|---|---|
| **Chair:** | Simon Barnes |
| **Newsletter:** | Simon Barnes |
| **Treasurer and Membership:** | Sam Franklin |
| **Speaker secretary:** | **Position Vacant** |
| **Observing Sessions coordinators:** | Chris Brooks, Jon Gale, |
| **Web & IT coordinator:** | Sam Franklin |
| **PR and Design:** | Tracey Kelly |

**Contact the Society here:**

| | |
|---|---|
| **Email:** | contact@wasnet.org.uk |
| **Website url:** | https://wasnet.org.uk/ |
| **Public Facebook Page** | https://www.facebook.com/Wiltshire-Astronomical-Society-154077261327030/ |
| **Members only Facebook group:** | https://www.facebook.com/groups/wiltshire.astro.society/ |
| **Committee Page:** | https://wasnet.org.uk/committee/ |

**Observing Sessions Location:** The observing area is located in the Picnic area to the side of the Red Lion Pub (Lacock) car park
Postcode: SN15 2LQ

what3words = airbag.shudders.losing




**Hall Meeting Location:** Pewsham Community Centre, Lodge Road, Pewsham
Chippenham, SN15 3SY

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