Wiltshire Astronomical Society

WAS News

October 2025

This Month's Speaker

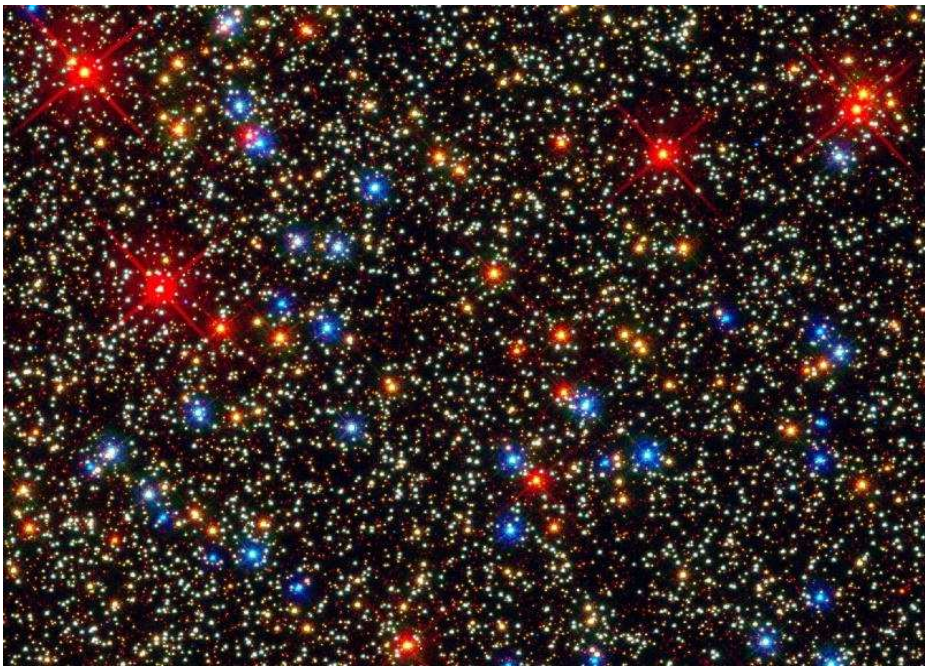
Michael F Barratt FRAS

The Colourful Lives of Stars

A keen amateur astronomer since the age of nine, Michael is a Fellow of the Royal Astronomical Society, a Member of the British Astronomical Association and Council Member of the Society for Popular Astronomy (Publicity Officer).

Michael lectures and leads stargazing sessions on Fred Olsen Cruise Line ships as well as to schools, scouts/guides, adult organisations etc.

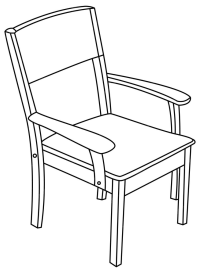
Locally he is a member of Fordingbridge Astronomers close to the New Forest, Hampshire. Before retirement he was a solicitor in industry and currently a lay minister in the Church of England. Michael's special interests are the planets of the solar system and deep sky objects which he enjoys imaging.



We are 30 Years old !

Inside this issue

Special points of interest



About the SPA

The Society for Popular Astronomy

The Society for Popular Astronomy (SPA) is one of the UK's leading national organisations dedicated to making astronomy accessible to everyone, regardless of age or experience. Founded in 1953 as the *Junior Astronomical Society*, its aim has always been to encourage newcomers to take up the hobby and to support amateur astronomers in their observing and learning. The SPA offers a welcoming environment for beginners while also catering to those who have been observing for many years. Members benefit from a wide range of resources, including a regular magazine (*Popular Astronomy*), online guides, observing challenges, and news updates about the latest developments in space and astronomy.

A particular strength of the SPA is its Observing Sections, which cover a wide variety of interests: the Moon, planets, deep-sky objects, variable stars, the Sun, and more. These sections provide practical advice, observing notes, and opportunities to contribute useful data to wider astronomical research.

The society also organises online talks, in-person meetings, and occasional observing events, helping to bring together amateur astronomers from across the UK and beyond. Its forums and social media presence give members the chance to ask questions, share their experiences, and celebrate their observations.

Importantly, the SPA has retained its founding ethos of being **"astronomy for all."** Whether you own a large telescope, a pair of binoculars, or simply enjoy looking up at the night sky with the naked eye, the society offers encouragement, guidance, and a community to share your enthusiasm.

www.popastro.com

Report from the Chair

We were delighted to receive such positive feedback from last month's speaker, who remarked that our society is among the friendlier she has visited. This is a credit to all of you, and a reflection of the welcoming atmosphere we create together. Our shared passion for astronomy brings us together, and it's wonderful to see that sense of enjoyment naturally expressed through our friendliness.

It's also encouraging to see that our new venue has been well received. Andy was especially pleased—thanks to the convenient takeaway just around the corner!

Our last meeting marked our first trial of a combined Zoom and in-person format. Overall, it was a success, though there are a few areas we can improve. I'm confident we'll take another step forward this month.

I am delighted to see several members making the most of the recent clear nights and sharing their astrophotography on our members-only Facebook page (you will find some of these images in this newsletter too). For those who are not photographers, I would also be pleased to feature your observing logs, written notes, or sketches, should you wish to contribute.

Unfortunately, the weather was less cooperative for our scheduled observing sessions last month. Despite some initial optimism during the first session, the cloud cover remained stubborn and conditions did not improve. The second session also succumbed to poor weather. Thanks go to those members who attended the first evening in spite of the forecast. Let's remain hopeful that this month's sessions will fare better.

Members are also reminded that ad hoc observing sessions can be arranged at any time. Should you wish to propose one, please contact the observing team by email.

A Call for Support

I know I may sound like a broken record, but once again I'd like to ask if any members would be willing to take on a role within the society.

While we already have a full and exciting programme of meetings arranged for this season, it would be a tremendous help to have a *Speaker Secretary* in place to begin planning ahead for the 2026/27 season.

As you can appreciate, time is something the current committee often struggles to find, balancing family and work commitments alongside society duties. In my own case, I have recently been invited to lecture students at King Mongkut's University of Technology in Thailand, which will inevitably take time away from my efforts with Wiltshire AS. (so much for retirement!)

If you feel you could lend a hand—particularly in helping us secure future speakers—please give it some thought. Your contribution would make a real difference to the running of the society. Thank you.

Did anyone manage to capture the Aurora? The clouds rarely seem to co-operate, but if you did, we'd love to see your photos!

I know several members are now using SeeStar and Dwarf 3 for imaging, and it would be great to share some of those results in the Newsletter as well as on our Facebook page.

As we head into the winter months, the longer nights bring more opportunities to enjoy the wonders of the night sky—just remember to wrap up warm. I look forward to hearing about your observations, and perhaps you might even consider sharing them at our AGM next June, when we have time set aside for short member talks.

Clear Skies!

Simon

The Bubble Nebula. Taken by Matthew Terrell.

Planet Watch: What to See in the September 2025 Night Sky

October offers some excellent opportunities for planetary observing, with several worlds well placed in the evening sky.

Mercury
The innermost planet begins the month lost in the solar glare but reappears in the morning sky mid-October. By the 20th it is rising about an hour before the Sun, shining brightly at magnitude –0.8 in Virgo. A small telescope will reveal its tiny gibbous disc.

Venus
Brilliant Venus continues its reign as the "morning star." Rising around 4 a.m., it blazes at magnitude –4.4 in Leo and is unmissable in the east before dawn. Through a telescope, its gibbous phase is easily visible.

Mars
Mars lingers in the morning sky but remains faint at magnitude +1.5, moving from Gemini into Cancer during the month. Although small and distant, it's worth noting as it slowly brightens on its journey toward next year's opposition.

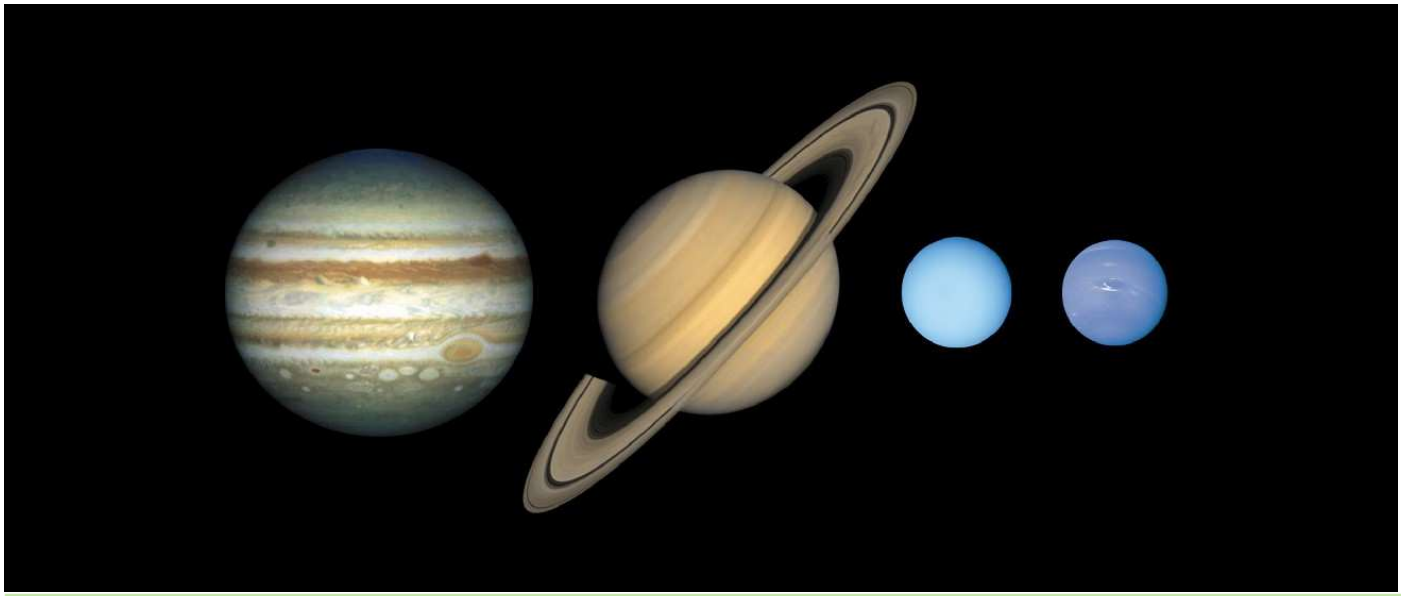
Jupiter
The giant planet is the star attraction of October nights. Shining at magnitude –2.8 in Taurus, it is visible all evening and is at **opposition on the 6th of October**—its closest and brightest of the year. Even binoculars will reveal its four Galilean moons, while a telescope shows cloud bands and the famous Great Red Spot.

Saturn
Saturn is a splendid evening object in Aquarius, shining at magnitude +0.6. Best viewed in the early evening, it sets around midnight. The rings are well displayed, though gradually narrowing as we move toward edge-on later in the decade.

Uranus
Uranus reaches opposition on 20 October in Aries, glowing at magnitude +5.7—just within naked-eye range under dark skies. Binoculars make it easy to pick out, and a telescope will reveal its small bluish-green disc.

Neptune
Neptune lies in Aquarius, highest in the south during the evening, at magnitude +7.8. Binoculars will locate it, though a telescope is needed to see its tiny bluish disc.

Summary: October is a particularly good month for gas giant enthusiasts, with both Jupiter and Uranus at opposition. Venus dominates the morning sky, while Mercury makes a brief appearance before dawn later in the month.



Summary of the planets in October 2025:

- **Mercury** – Returns to the **morning sky mid-month**, shining at –0.8 in Virgo, low before sunrise.
- **Venus** – Brilliant **morning star** in Leo, magnitude –4.4, rising around 4 a.m.
- **Mars** – Still faint at +1.5, in Gemini moving into Cancer, best seen before dawn.
- **Jupiter** – The **main highlight**, at **opposition on 6 October** in Taurus, shining at –2.8 and visible all night.
- **Saturn** – Evening object in Aquarius, magnitude +0.6, setting around midnight, rings well displayed.
- **Uranus** – At **opposition on 20 October** in Aries, +5.7, visible in binoculars under dark skies.
- **Neptune** – In Aquarius at +7.8, highest around 10 p.m., a small bluish disc in telescopes.

✨ **Highlights**: Both **Jupiter (6 Oct)** and **Uranus (20 Oct)** reach opposition this month, making October a great time to observe the giant planets.

October 2025: Key Planetary Events (BST)

1. Hunter's Supermoon – October 6/7

- **Peak Illumination:** October 6 at 11:47 PM BST
- **Details:** The **Hunter's Moon** is the full moon closest to the autumn equinox. This year, it coincides with a **supermoon**, appearing larger and brighter in the sky.

2. Mercury at Greatest Eastern Elongation – October 29

- **Details:** Mercury reaches its greatest eastern elongation, making it the best time to observe the planet just after sunset. Look for it low in the western sky

October Meteor Showers: A Sky Full of Shooting Stars

October brings some of the most reliable and beautiful meteor showers of the year. As the nights grow longer and darker, the sky becomes the perfect canvas for these cosmic fireworks.

Draconids (Early October)
The Draconid meteor shower peaks around **October 8–10**. This shower is usually modest, producing only a few meteors per hour, but it can surprise with occasional outbursts. Best viewed just after sunset, the Draconids appear to radiate from the constellation **Draco**, high in the northern sky. Unlike many other showers, these meteors are often slower-moving, creating a graceful, floating effect across the sky.

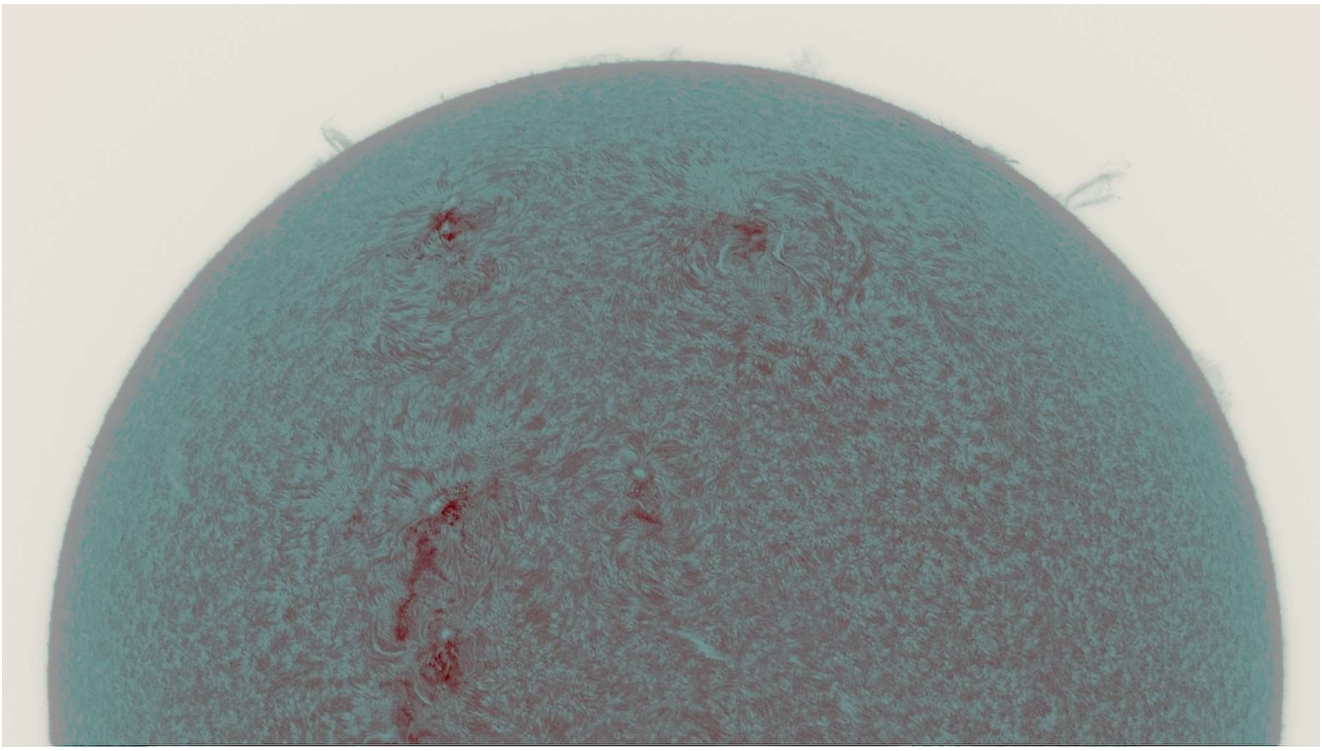
Orionids (Late October)
The more prominent **Orionid meteor shower** peaks around **October 20–22**. Produced by debris from **Halley's Comet**, the Orionids are known for their bright, fast meteors that often leave glowing trails. At their peak, observers can expect **15–20 meteors per hour** under dark skies. The radiant is located in the constellation **Orion**, making this shower easy to locate in the early morning hours.

Members Images

C5 - the hidden galaxy in Camelopardalis . Named so, because its in the "Zone of Avoidance" in the Milkyway. Around 10 million light years away, and big enough and bright enough to been with the naked eye, had out galaxy not been in the way. Imaged in NiR to try and see through our galaxys dust. This is 6 hours worth of 300 second exposures.

The Sun from Sunday 21 Sept, using the Hydrogen Alpha wavelength. The image has been set to a negative to help bring out the edge prominences. This was with a 40mm Solar telescope, and a IMX715 sensor, which isn't big enough for a complete solar disc in one image

Image by Matthew Terrell



Constellation Focus: Cepheus – The Quiet King of the Northern Sky

As we begin the autumn observing season, it's a great time to turn our telescopes and binoculars toward one of the lesser-known—but fascinating—constellations of the northern sky: **Cepheus**.

Who Was Cepheus?

In classical mythology, **Cepheus** was the king of Ethiopia, husband to **Cassiopeia**, and father of **Andromeda**—all of whom now shine in the night sky alongside him. The myth tells of how his daughter was rescued by **Perseus** from the sea monster **Cetus**, and the gods commemorated the family (and their drama) with a place among the stars.

Cepheus is easily overlooked due to its relatively faint stars, but its crown-like shape and position near **Cassiopeia** and the **North Star (Polaris)** make it a fun constellation to hunt down and explore—especially from dark-sky locations.

Where and When to See It

Cepheus is a **circumpolar** constellation from the UK, meaning it never sets below the horizon and can be seen year-round. However, it's best viewed during **late summer through early winter**, when it reaches a higher altitude in the evening sky.

To find it, look northward near **Cassiopeia's W-shaped asterism**. Cepheus forms a rough house-like shape—like a child's drawing of a home with a peaked roof.

Stars of Interest

While not home to any particularly bright stars, Cepheus offers a few noteworthy stellar treasures:

- **Alpha Cephei (Alderamin):** The brightest star in Cepheus, a white subgiant about 49 light-years away. Interestingly, due to Earth's axial precession, Alderamin will become the North Star in about 7,500 years!

- **Mu Cephei (The Garnet Star):** A deep red supergiant and one of the largest stars visible to the naked eye. It's a real treat in binoculars—its rich reddish hue has earned it the nickname "Herschel's Garnet Star." William Herschel himself described it as "deep garnet," and it's a favourite for amateur observers.

- **Delta Cephei:** This star is the prototype of **Cepheid variable stars**, crucial to astronomy. These pulsating stars help measure distances to far-off galaxies, acting as a kind of cosmic yardstick. Watch it change in brightness over several days—an excellent variable star project for beginners!

Deep Sky Delights

Cepheus lies in a rich part of the **Milky Way**, so there's plenty to explore with a telescope:

- **NGC 6946 (The Fireworks Galaxy):** Just over the border in Cygnus, but worth a look from Cepheus' area. This face-on spiral galaxy has hosted more than 10 supernovae in the past century.

- **IC 1396 and the Elephant's Trunk Nebula:** A vast emission nebula and dark nebula combination. The Elephant's Trunk is a popular astrophotography target, though challenging visually without large aperture scopes and dark skies.

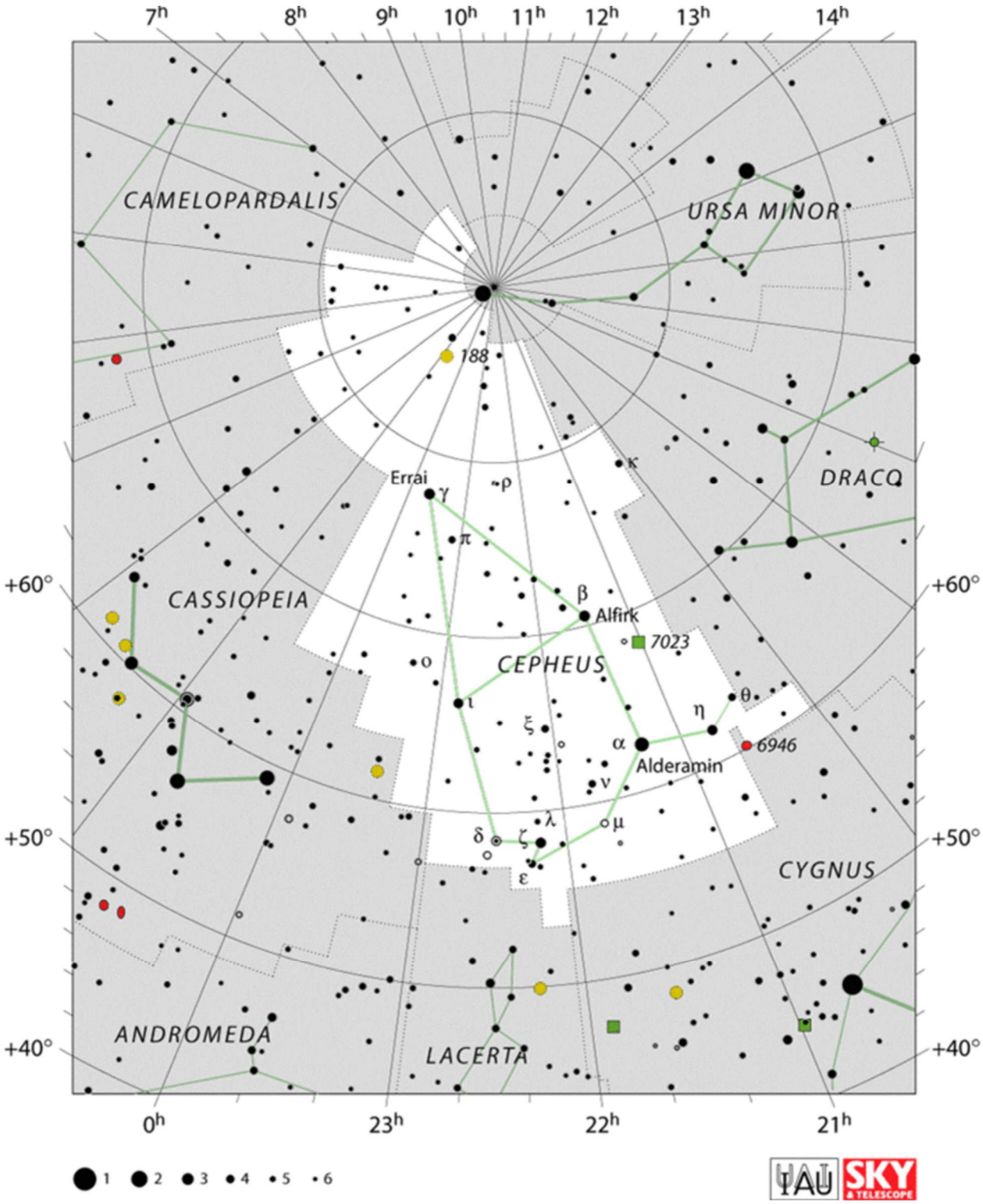
- **NGC 7023 (The Iris Nebula):** A beautiful reflection nebula around a young star. Best viewed with moderate aperture telescopes, it offers a rewarding sight for deep-sky enthusiasts.

Why Observe Cepheus?

While it might not be as famous as Orion or Ursa Major, Cepheus offers something for everyone—mythology lovers, deep-sky chasers, variable star observers, and astrophotographers alike.

Next time you're out under a dark sky, take a moment to get to know this quiet northern monarch. He may not shout for attention, but Cepheus rewards those who take the time to explore his realm.

Constellation Focus: Cepheus – The Quiet King of the Northern Sky



Beginners Pages

Understanding Telescope Mounts: The Backbone of Astronomical Observation

When we think of telescopes, our minds often jump to lenses, mirrors, and magnification. But one of the most critical—and often overlooked—components of any telescope setup is the **mount**. A telescope mount is more than just a stand; it's the foundation that determines how smoothly and accurately you can observe the night sky.

Why Mounts Matter

A telescope mount serves two primary functions:

1. **Support** – It holds the optical tube steady and secure.
2. **Motion Control** – It allows the telescope to move and track celestial objects across the sky.

Without a stable and precise mount, even the most advanced optics can be rendered ineffective. Vibrations, poor alignment, or inaccurate tracking can quickly turn a promising night of stargazing into a frustrating experience.

Types of Telescope Mounts

There are two main categories of mounts, each with its own strengths and ideal use cases:

1. Altazimuth Mounts (AZ)

These are the simplest type, moving in two directions: altitude (up and down) and azimuth (left and right). They're intuitive and easy to use, making them ideal for beginners and casual observers.

- **Pros**: Lightweight, affordable, quick setup.
- **Cons**: Not suitable for long-exposure astrophotography due to field rotation.

Variants:

Dobsonian Mounts – A popular altazimuth design for large Newtonian reflectors. They offer excellent stability and simplicity at a low cost.

2. Equatorial Mounts (EQ)

Designed to follow the rotation of the Earth, equatorial mounts move along two axes: right ascension (RA) and declination (Dec). Once polar-aligned, they can track celestial objects with a single motor.

- **Pros**: Ideal for astrophotography and precise tracking.
- **Cons**: Heavier, more complex setup, steeper learning curve.

Variants:

- **German Equatorial Mount (GEM)** – Common among amateur astrophotographers.
- **Fork Mounts** – Often used with Schmidt-Cassegrain telescopes.

Go-To and Motorized Mounts

Modern mounts often come equipped with **Go-To systems**, which use motors and onboard computers to automatically locate and track objects. These are invaluable for observers in light-polluted areas or those unfamiliar with star charts.

- **Manual Mounts**: Great for learning the sky and building observational skills.
- **Motorized Mounts**: Ideal for convenience and astrophotography.

Choosing the Right Mount

When selecting a mount, consider:

- **Your observing goals** (visual vs. astrophotography)
- **Portability needs**
- **Budget**
- **Telescope weight and size (remember you will have to carry it unless you plan to house it in an observatory)**

A good rule of thumb: **Invest in the best mount you can afford**. A high-quality mount can dramatically improve your observing experience and will likely outlast several telescope upgrades.

Final Thoughts

In astronomy, precision is everything. Whether you're scanning the lunar surface or capturing distant galaxies, your mount is the unsung hero of the night sky. Understanding its role and choosing wisely can elevate your observing.

Clear skies!

A selection of mount types

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

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	TBA	TBA	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 Observatory, 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

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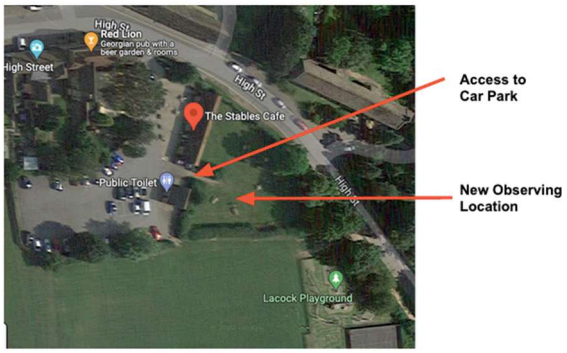

Hall Meeting Location:	Pewsham Community Centre, Lodge Road, Pewsham Chippenham, SN15 3SY

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