SPACEWATCH

the newsletter of the Abingdon Astronomical Society

MAIN Meeting

9th June 2025

When galaxies were born: recent results from JWST

Prof. Richard Ellis(University College London)

EDITORIAL

Welcome to the last Spacewatch for the 24/25 season. As always I would like to thank Gwyneth, Steve Creasey and Chris Holt for their contributions. The May AGM got a little tight as we were only just quorate and although I know people don't like AGM's if the numbers keep dropping at the AGM then we won't be able to make any decisions there. I would like to thank Robin Glover and Charline Giroud for stepping up to stand on the committee. I am certainly looking forward to the summer break. As always if somebody else wants to take on Spacewatch for next session then I could do with the break. With summer coming we no longer get any dark skies and the major planets have all now moved into the morning skies but there is always the moon to watch and the bright globular clusters and open clusters of summer will still be visible, even in the twilight skies.

I hope you can make it to the June main meeting as we are honoured to have Professor Richard Ellis coming to talk on early galaxies. For those that follow the astronomy media will know that our understanding of how galaxies form in the early universe is rolled over almost every month now.

Sometime in July we will sit down and look at organising the beginners meeting program for next year so if there are any topics you would like us to cover or if you would like to do a talk yourself, please see any member of the committee.

As noted in the other meetings section we now have a WhatsApp group going and as we enter the NLC season this could be useful if we get some decent displays. Unfortunately, these tend to happen late in the evening or in the early morning but it is worth it. You will need a flat NE-N-NW horizon to see them well.

It seems to have been a bit quiet on the imaging front except for Charline imaging the ISS.

June also sees the summer solstice on the 21st June as neo-pagans make their way to neolithic sites. However as seen in our last main talk very few sites actually have a solar connection and even then it is more likely a midwinter one than a midsummer one. Whilst Stonehenge has a solar connection Avebury for example doesn't.

My apologies in the last edition for attributing a couple of the southern hemisphere images to Steve Creasey whereas in fact they were taken by Cristina – who manages all their smartscopes 😊

For those interested in these scopes I have included in the members images sections a comparison of the fields of view of both the S50 and the S30 on the moon.

I apologise for the somewhat shorter than normal edition of Spacewatch this month partially due to the fact we have no meetings report this month but also due to the lack of

images submitted. After June we now have two months off and although there are astronomical events happening, in particular the Perseid Meteor shower in August, which will be impacted by the Full Moon on its maximum dates.

I hope you all have a good summer and get some images etc. for the September Spacewatch.

The editor of "SpaceWatch" is Owen Brazell, who would very much appreciate your stories & contributions. In particular whilst many fine images are being posted on the discussion group it would be nice to have some in the SpaceWatch. Please send any news, observations, photos, etc. to:

owenb1367@gmail.com

REPORT OF LAST MEETING

May's Meeting

We don't usually have a report on the May meeting as it was the AGM.

I would however like to mention the new committee which was elected at the meeting in Owen Brazell (Chairman) David Quick (treasurer), Chris Holt (Secretary), Bob Dryden (Publicity Officer) and committee members Ian Smith, Dan Larkin Steve Creasey, Cristina Garcia Pozuelo Sanchez, Robin Glover and Charline Giroud.

THE NIGHT SKY FOR JUNE 2025

What's up for June 2025

Steve Creasey and Cristina Garcia Pozuelo Sanchez

Well, that's the last of the Astronomical Dark gone until the 23rd of July.
Due to the Northern Hemisphere now being tilted towards the Sun, anything above roughly 48 33' 40"N loses Astronomical Darkness for lengthening durations the further North you go. For example, on the 21st of June (the Summer Solstice) the French town of Guingamp has its shortest night, with only 4 minutes of Astronomical Darkness. Here in Oxfordshire we have roughly two months without Astronomical Darkness. Reykjavik, Iceland, just outside of the Arctic Circle, has nearly five months with no Astronomical Dark, and Svalbard, Norway, has just over four months during the Summer where the Sun doesn't set at all! Not a great place for Astronomy. Still lots to see through June, despite the lack of darkness.

Look out for the Noctilucent Clouds in the evening and morning twilight.
In the Early part of June we still have lots of Galaxies to look at in Virgo, Coma Berenices and Ursa Major, as well as plenty of Globular Clusters.
Later in the Month the Milky Way becomes more obvious, with all of its nebulae and Open Clusters.

It is now also the season for Noctilucent Cloud which can be a spectacular sight, ghostly white clouds shining brightly at 2am. Noctilucent clouds are the highest clouds in our atmosphere, a diffuse layer of water ice crystals, also known as Polar Mesospheric Clouds (PMC's) when

seen from space. The best times to see NLC's is from around 11pm -Midnight and again from 01:00 – 02:30, these are the points when the sun is low enough below the horizon to still be reflecting off of the ice crystals, but not too low that it doesn't.

The Planets

Mercury
Best placed at the end of June in the evening sky. 2%-lit waxing Moon nearby 26 June.

Venus

Morning planet. Greatest western elongation 1 June, it will appear farthest from the sun in the morning sky, about 46 degrees from the sun. This position in its orbit is known as greatest western elongation. Each morning after this, Venus will move slightly closer to the sun. Also, the planet Saturn will be nearby.

Mars

Low-altitude evening planet. In conjunction with similar brightness Regulus 16 June. Early risers on 19 June 2025 get to see the last quarter Moon near Saturn with a tricky Neptune close by too.

Jupiter

Jupiter will lie low in the west the first week of June, evening planet near the Sun. Solar conjunction 24 June. Then it drops too close to the horizon to be easily viewed in the bright twilight. It'll emerge in the morning sky sometime in July. Thereafter a morning planet.

Saturn

Another poorly located morning planet, currently close to Neptune. Saturn blends in with 1st magnitude stars and moves farther away from Venus this month.

Uranus

Not visible this month.

Neptune

Difficult morning planet. Possibly visible on 19 June (02:15 BST (01:15 UT)) when near Saturn and 47%-lit waning Moon.

Summer Solstice
The summer solstice occurs in June in the Northern Hemisphere and marks midsummer: the 'longest day' and 'shortest night' of the year. On this day, the number of hours of daylight are at their maximum, while the number of hours of night are at their minimum.
However, while most people consider the summer solstice to be a day, it is in reality an exact moment in time that falls upon that day. This moment comes when whichever hemisphere you're in is most tilted towards the Sun.
In 2025 the summer solstice will occur on Saturday 21 June at 03.42 BST (02.42 GMT).

Our Earth rotates on its axis once each day, producing the cycle of day and night.
At the same time, the Earth moves around the Sun on its orbit over the course of a year.
However, the axis of rotation of the Earth is not lined up with the axis of motion around the Sun. Instead, it is tilted slightly at 23.44°.1
This tilt means that during one half of the year the North side of the Earth is tilted slightly towards the Sun and the South is tilted away. For the other half of the year the reverse is true.
At the exact moment that the northern hemisphere is most tilted towards the Sun, the northern hemisphere experiences its summer solstice. The southern hemisphere, by contrast, has its winter solstice.
About six months later, the northern hemisphere has its winter solstice while the southern hemisphere is at its summer solstice.
These key points in the year, along with the equinoxes, help to determine the seasons on Earth.

Meteor Showers

The June Bootid meteor shower will be active from 22 June to 2 July, producing its peak rate of meteors around 27 June.
Over this period, there will be a chance of seeing June Bootid meteors whenever the shower's radiant point – in the constellation Bootes – is above the horizon, with the number of visible meteors increasing the higher the radiant point is in the sky. From Oxford the radiant point is circumpolar which means it is always above the horizon and the shower will be active throughout the night.
The radiant point culminates(is highest in the sky) before nightfall – at around 22:00 BST – and so the shower is likely produce its best displays soon after dusk, when the radiant point is still as high as possible.
At this time, the Earth's rotation turns Oxford to face optimally towards the direction of the incoming meteors, maximising the number that rain vertically downwards, producing short trails close to the radiant point. At other times, there will be fewer meteors burning up over Oxford, and they will tend to enter the atmosphere at an oblique angle, producing long-lived meteors that may traverse a wide area of the sky before completely burning up.
The shower is expected to reach peak activity at around 12:00 BST on 27 June 2025, and so the best displays might be seen before dawn on 27 June and after dusk on 27 June.

Comets

There are no bright comets this month, however after the surprise of C/2025 F2 (SWAN) in April you can never write these things off and if anything does come then it will be noted on the AAS list or the WhatApp group.

Deep Sky Objects

M101 The Pinwheel Galaxy in Ursa Major

M83 The Southern Pinwheel galaxy in the constellation of Hydra

NGC 5897 Globular cluster in Libra

IC 4592 The Blue Horsehead Nebula in Scorpius

M5 The Rose cluster, Globular cluster in Serpens

IC 4593 The White Eyed Pea, Planetary nebula in Hercules

IC 4665 The Summer Beehive cluster, open cluster in Ophiuchus

NGC 6572 The Blue Racquetball. Planetary nebula in Ophiuchus

NGC 6229 Globular cluster in Hercules

IC 1138 Lenticular galaxy in Corona Borealis

Clear Skies
Steve and Cristina

Upcoming Meeting Notes

Observing evening: There will be no further virtual observing sessions this season. This due to the fact that after the clocks go forward it no longer gets dark enough early enough to do it. I am also looking for someone else to take over running them if we continue them next session.

Beginners' meetings: There is a beginner's meeting on the 16th June at the usual venue starting at 20:00. Talk titles to be The Solar Cycle and the Milky Way topics as always subject to change depending on speaker availability. This will be the final meeting of the session

Mailing List: After a number of months of issues with the aaslist failing we have now moved to a new list on groups.io called

abingdonas@groups.io

The new Groups.io group mailing list has been created and Groups.io are sending out invitations to 89 addresses
The old list on its homepage said:

1. **This mailing list is a public mailing list - anyone may join or leave, at any time.**

This mailing list requires approval from the List Owner, before subscriptions are finalized.
...
This mailing list is for email discussions of astronomical topics and the exchange of messages, notices of meetings and events organised by Abingdon Astronomical Society and others, and astronomical news between members of Abingdon Astronomical Society.

On the new list homepage (at https://groups.io/g/abingdonas/),
This Groups.io Group and mailing list is for email discussions of astronomical topics and the exchange of messages, notices of meetings and events organised by Abingdon Astronomical Society and others, and astronomical news between members of Abingdon Astronomical Society.

Group membership is primarily for current and/or recent members of Abingdon Astronomical Society. Those who are permitted to join the Group but do not become members of Abingdon Astronomical Society nor have been recent members may, in due course, be removed from this Group.
The Group is not listed in the Groups.io directory but, currently, once found the archived messages will be visible publicly.

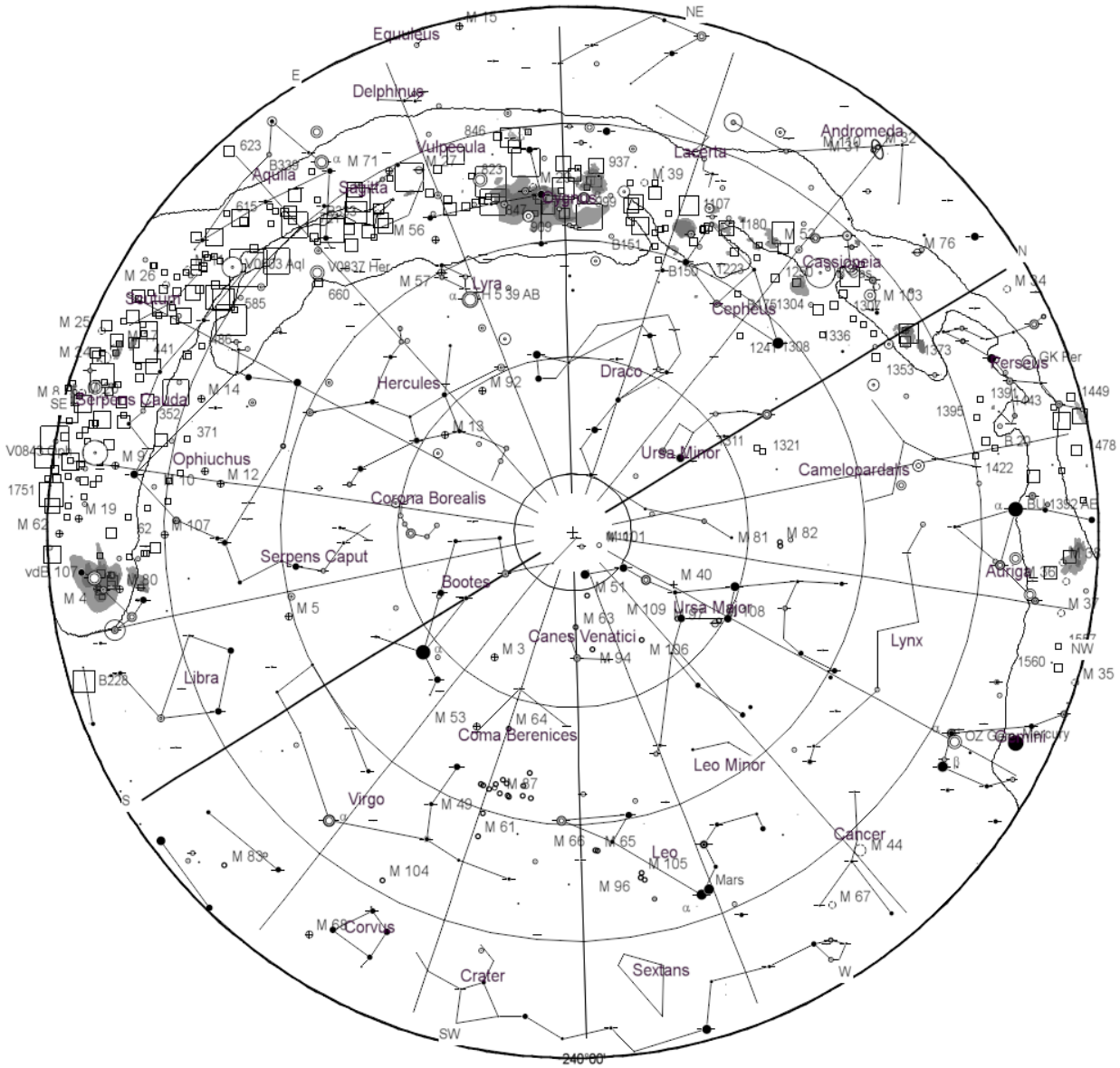
Members of the current aaslist should have been invited to join but if you have not then you can subscribe from the website

We also operate two Facebook groups so you can also keep in touch with the society through those.

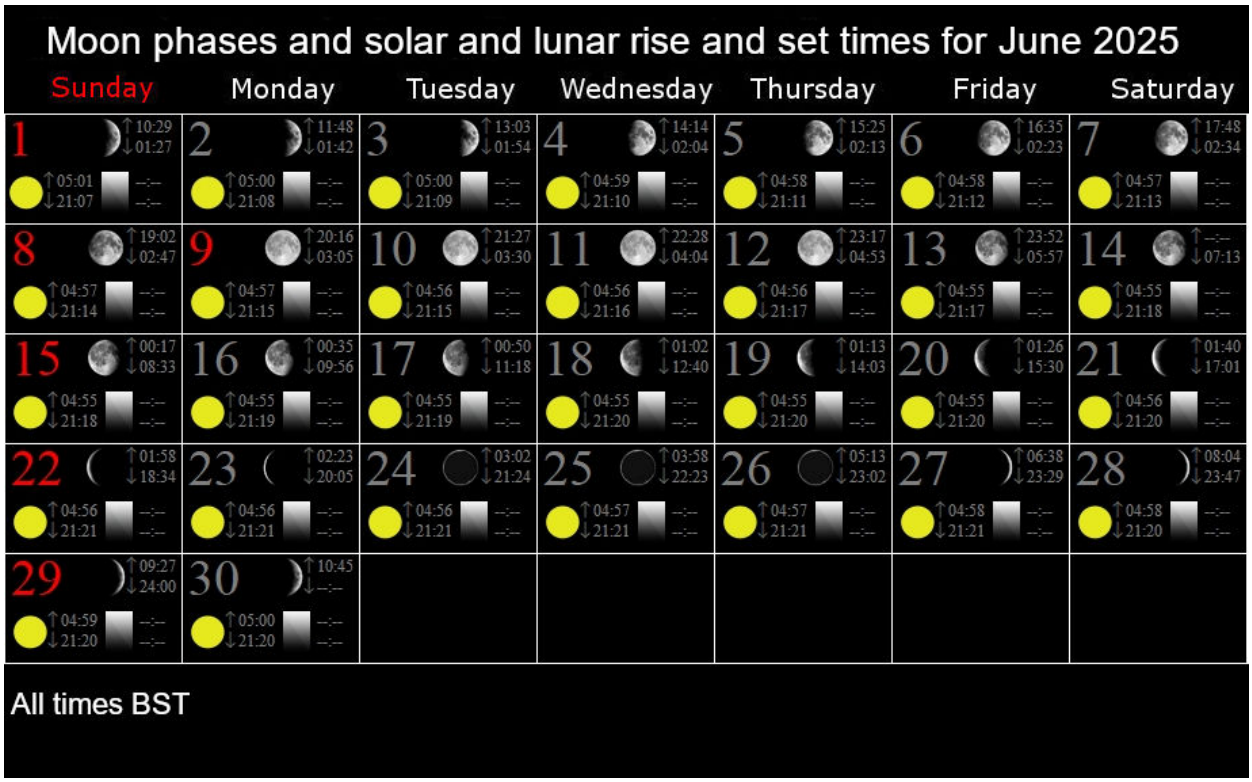
We have also setup a new WhatsApp group for real time announcements of astronomical/meteorological (NLC, Auroral) phenomena. The group is open to all members of the society. To join leave your mobile number with any member of the committee and you will receive an invite to join

STAR CHART

The night sky at 22:00 (BST) Sunday15th June 2025

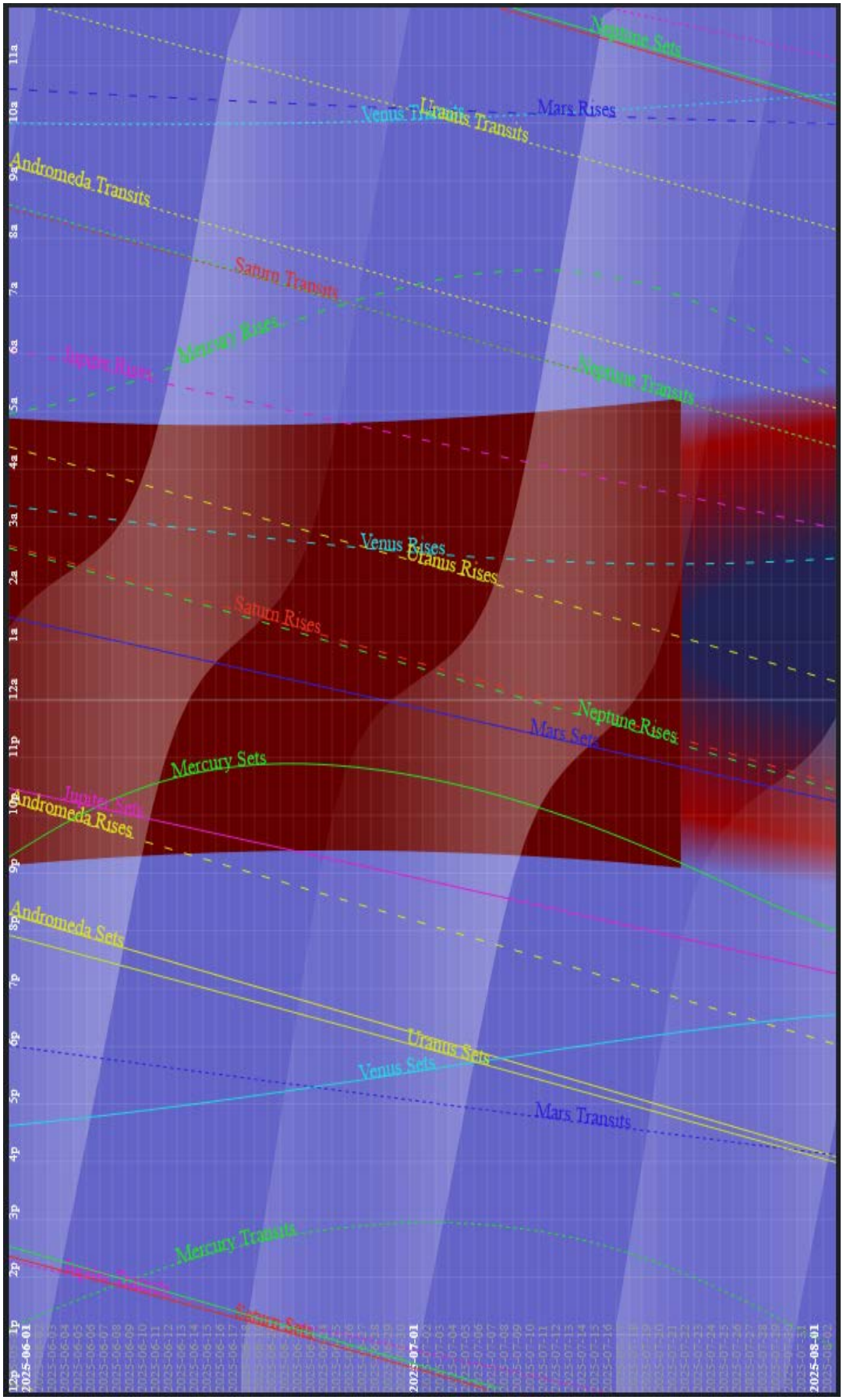


MOON PHASES JUNE 2025



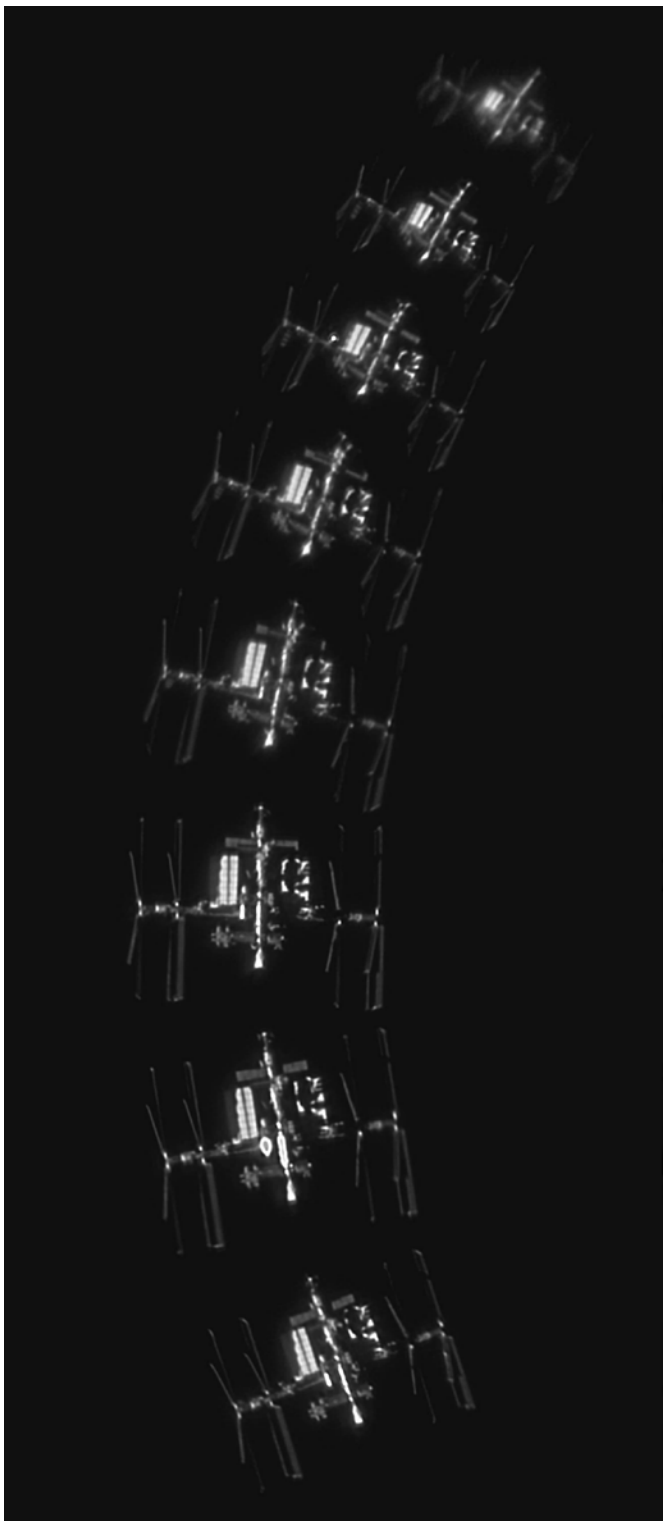
Beginners Meeting Talks 2024/25

Date	Long Talk	Speaker	Long Talk	Speaker
24th FEB	Observing Double Stars	Ian	Asteroids	Dan
24th MAR	Deep Sky Filters	Owen	Pluto	Dan
28th APR	Meteorites	Owen	Artificial Satellites	Bob
19th MAY	A Lunar Tour	Ian Smith	TBC	Cristina
16th JUN	The Solar Cycle	Ian	The Milky Way	Bob



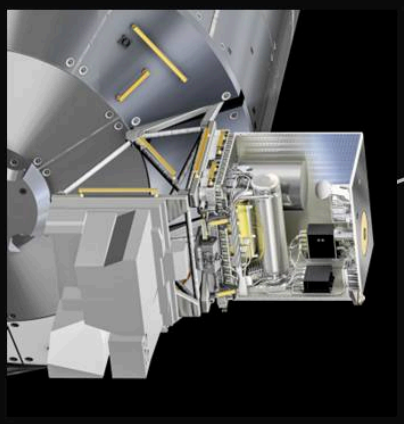
Planet rise and set times for June/July 2025

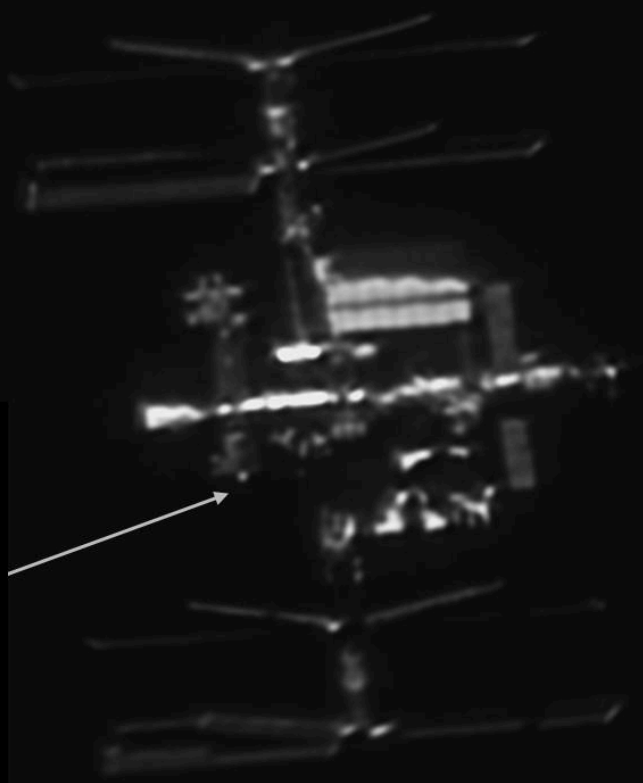
Recent images from Members

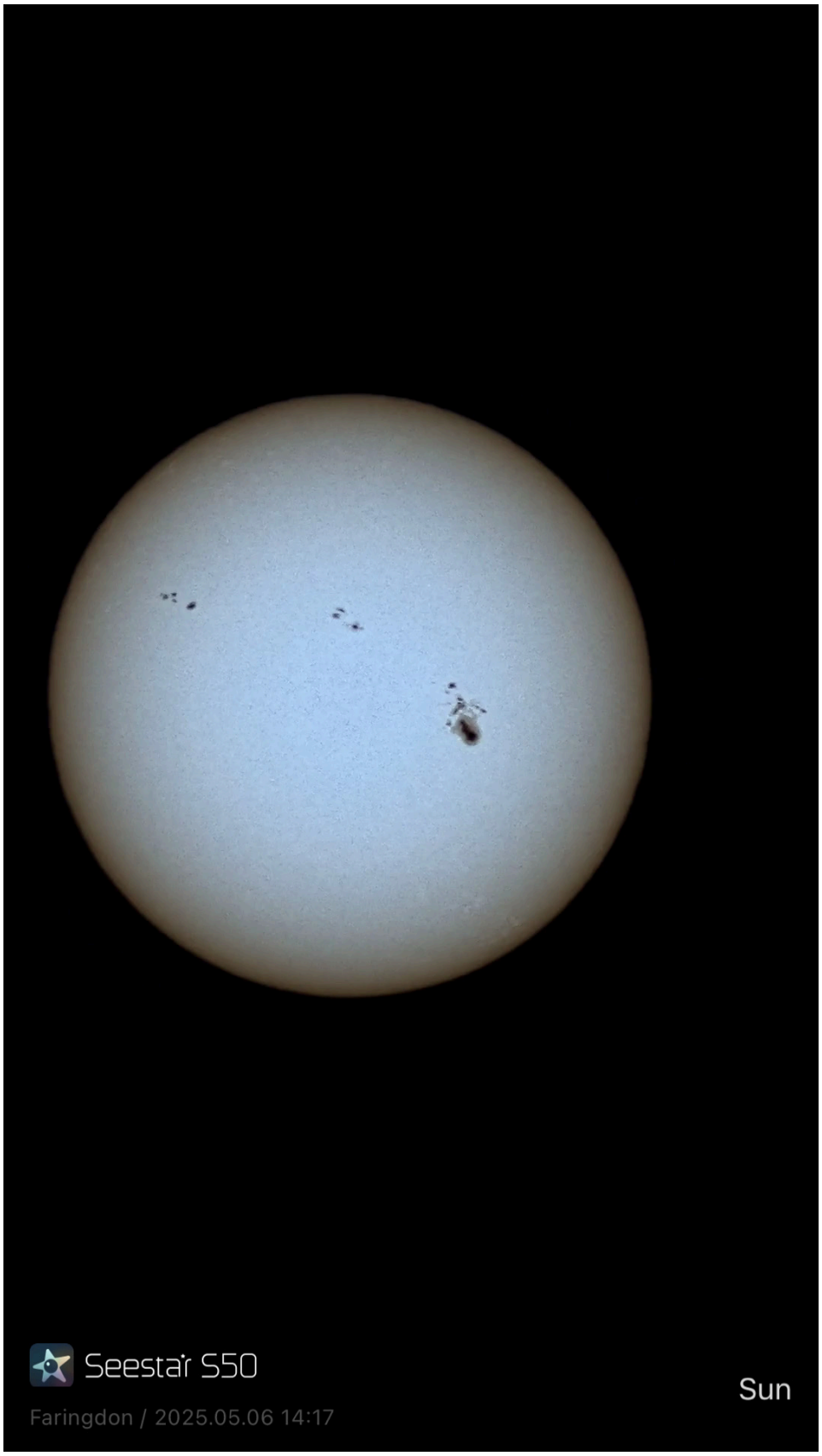


ISS pass – Charline Giroud

ACES
"Atomic Clock
Ensemble in Space"







Sun – Owen Brazell

Moon ZWO Seestar S50 – Owen

Moon ZWO Seestar S30 – Owen – to compare FOV for both telescope at 1x magnification