SPACEWATCH

the newsletter of the Abingdon Astronomical Society

MAIN Meeting

9th February 2026

The Martian atmosphere, missions in use and in the pipeline and why it matters

Dr Kevin Olsen
University of Oxford

EDITORIAL

Welcome to the February edition of Spacewatch. To start I have some very sad news with the death of Allan Chapman. Allan Chapman was a noted author and speaker that gave many talks to the society on historical subjects. He was the first (and so far only) life member of the society. Although he had not been well for some time it was still a surprise.

The weather in January has been awful for astronomy and I have not managed to get the Seestar out on any night. We were however treated to a major auroral display that some people caught through cloud. The storm was seen well to the south and those lucky enough to see it said that it showed much red and green colouring, some visible to the naked eye. It is worth noting that of the many wonderful pictures that we see of the aurora now they all represent what the camera sees and what you may see with the naked eye will be in general much less exciting.

The really big thing this month could be the launch of the Artemis II mission taking four astronauts around the moon. The current launch plan would look like the second week of February if the fuel loading tests go OK. This would be the first humans back around the Moon since 1972. This includes the first woman and first black person around the moon and possibly the ESA mascot Shaun the sheep.

We have a number of possible outreach events coming up in March/April so if you are interested in helping out at any of these please see Chris. Our work supporting Science Oxford seems to have been taken over by Marcham Astronomy group. I am not sure of the reasoning behind asking them as I thought we were doing a good job there.

As you can see in the meetings section the astronomy convention season is starting again with both European AstroFest at the start of February and the Practical Astronomy Show at the beginning of March. For those specifically interested in deep sky observing the British Astronomical Association Deep Sky Section is holding its annual meeting in Cheltenham at the end of March, see https://britastro.org/event/deep-sky-section-meeting-2026

for details.

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

January's Meeting

Chris Pearson is head of the Astrophysics programme at RAL Space. His PhD was in "Galaxy Evolution and Cosmology" with Prof. Michael Rowan-Robinson at Imperial College, London and has worked on large galaxy surveys for both ground based telescopes and space borne missions. He worked for 7 years in Japan on the AKARI space telescope before moving to the UK to RAL Space to work on the Herschel Space Observatory. He now works on the ARIEL mission searching for exoplanets and the Square Kilometre Array radio telescope, the largest scientific facility in the history of humankind. These are his own words as an introduction and he kindly stepped into the breach when the planned speaker couldn't attend.

His talk was 'The Square Kilometre Array Observatory: Big Data and Transformational Science'.

Over the years we have had updates on this facility, and we are now seeing it for what it is, our planet's largest ever scientific facility. Its earliest phase was the SKA MeerKAT array of radio dishes in Karoo national park 800km north of Cape Town. Plans for this group of 64 15m dishes run by the South African Radio Astronomy Observatory (SARAO) were already taking shape in the 1990s. Next would come a station of smaller dishes and one of lower frequency antennae. But there were some disagreements as to whether all this should be on the same area of the planet and the location of the lower frequency set up was given over to Australia. Hence SKA- Low, covering a frequency range of 50-350MHz. The SKA-Mid will cover a range of 350MHz-15.4GHz. SKA-Mid will total 197 dishes, which will be laid out in an area of roughly a square km, and in the shape of a spiral galaxy. This lay out makes it easier to work with the Earth's rotation. Chris also says these frequencies are forever protected against non-astronomical purposes.

SKA-Low is located about 800km from Perth in Western Australia in the Wajarri Yamaji country. It covers a huge area and consists of 131,072 2m high antennae, grouped into 512 stations with 256 antennae per station. The first image was in March 2024, using 1% of the total eventual facility. It covers 25 square degrees of the sky, showing 70 galaxies, taken by four stations and 1024 antennae. Once the others join in the same area is expected to reveal 600,000 objects. SKA-Mid has also been tested successfully, using one dish pointed at the zenith. Two dishes have also been linked to combine observation.

The data coming from each site will be huge, in the order of 350 petabytes per year, 700 petabytes or thereabouts. The demands for data storage will be so high that as much processing as possible will need to be done on site, then shared out to participating sites. HQ is on the Jodrell Bank site. The UK has a large chunk of data handling. This includes STFC, RAL. 23 different countries also have a cut. The USA is not involved because it has the New Mexico VLA, which it is upgrading. The VLA complex will then complement the two southern sites, as it provides the much-needed northern hemisphere coverage.

Sensitivity will continue to improve as more dishes become available. Observations will be made in stages and continue to release data even while more and more dishes and antenna stations become operational. It is hoped that extensive hydrogen mapping of the early universe can take place (= pre-star formation). Shorter wavelength stuff will be able to do searches for possible pulsars. Apparently, there are likely to be many millions of suspect pulsars per day, but these candidates may come down to less than a thousand a day, so the data needs to be sifted through. Pulsars are very accurate clocks; they can help to map the universe in excellent 3D. If

their timings are seen to fluctuate even by the tiniest amount, it implies there is some intervening space-warp effect, maybe by the gravitational effect from a supernova, or black hole. (We keep looking for Einstein out there.)

Full operation is anticipated by 2030 but there's a lot on the cards this year, so it's best to keep up via the skao.int website, which is very extensive and the graphics are excellent. You can really get close to the instruments. I personally like the SKA-Low antennae because previous speakers have compared them to Christmas trees, but now Chris had clarified this by saying their tops do look like metallic Christmas trees, supported by an arrangement of coat hangers.

THE NIGHT SKY FOR FEBUARY 2026

What's up for February 2026

Steve Creasey and Cristina Garcia Pozuelo Sanchez

This January has been pretty awful for astronomy and astrophotography, due to the good old British winter weather. The only bit of astrophotography I managed to do was of the Moon and Andromeda Galaxy (not together) with Cristinas Seestar S50 in Spain at the start of the month, and even the weather in Madrid wasn't that good, but we did get a few clear nights.

I should have realised January wasn't going to be great when we flew back to the UK on the 8th straight into Storm Goretti! To say that was a bumpy ride would be an understatement!!
Lots to look forward to in February including the European AstroFest 2026 on the 6th & 7th February at the Kensington Conference and Events Centre. Always good to pick up a bargain or two.

The Planets

Mercury – Evening planet reaching greatest eastern elongation (18.1°) on 19 Feb. Conjunction with Venus on 28 Feb.

Venus – Evening planet setting 30 minutes after sunset on 1 Feb, 70 minutes after by the end of the month.

Mars – Too close to Sun to be seen.

Jupiter - Evening planet, 60° altitude from the UK when due south. Waxing gibbous Moon nearby on 26 and 27 Feb.

Saturn – Evening planet yielding to expanding twilight late Feb. On 19 Feb, thin waxing Moon nearby, and separated from Neptune by 51 arcminutes.

Uranus – Well-placed evening planet, 5° south of the Pleiades.

Neptune – Evening planet in the constellation of Pisces.

Meteor Showers

Nothing for us up here in the Northern Hemisphere this month, however there will always be a few sporadic meteors around.

Comets

Unfortunately there are no brightish comets this month. The best will probably be 24P but it will require a telescope. It is greenish in colour (or was. The weather has been so awful I have not seen it for a month)

Deep Sky Objects

The Hyades, open star cluster in the constellation of Taurus.

NGC 1999 a Reflection nebula (with hole) in Orion.
NGC 2301 an Open Cluster in Monoceros.

IC443 The Jellyfish Nebula, a supernova remnant in Gemini.

M67 an Open Cluster in Cancer.

NGC 2903 a Barred Spiral Galaxy in Leo.

NGC 3190 a Spiral Galaxy in Leo, one of the Leo Quartet and Hickson 44 galaxy group.

NGC 3344 a Spiral Galaxy in Leo, belonging to a group known as the Leo Spur, a branch of the Virgo supercluster.

NGC 3166 and **NGC 3169** Interacting galaxies in Sextans.

Clear Skies
Steve and Cristina

BORROWING THE SEESTAR

As many of you will know, the Society now owns a Seestar 50 telescope, which is available for members to borrow.
It is small, extremely portable, easy to store, and easy to use via a free downloadable app on your smart phone.
Unlike traditional telescopes, you cannot look through the Seestar. It is used to take digital images that are downloaded to your phone (which you can then download to a PC, etc. for image processing if you so desire).
Apart from an off/on button physically on the telescope, all commands and instructions go through the phone app.
Apart from needing your own smart phone, everything you require is supplied.
You need no experience of either using a telescope or image processing to use the Seestar as it does virtually all the work for you automatically. However, there are plenty of user options if you want to play around with it.
There are two main requirements if you want to borrow the Seestar.
The first is you have to have been a member of the society for the past 18 months, and the second is you have to leave a deposit of £50. The money is fully refundable as long as you return the Seestar in the same condition as you received it.
You can borrow the Seestar for two calendar months (longer if nobody else has asked to borrow it) so you get plenty of time to take lots of images.
If you are interested in borrowing the equipment contact me at bobdryden@ntlworld.com

Bob

Upcoming Meeting Notes

Observing evening: Observing evening: There will be no virtual observing sessions this season unless we can find someone to take over running them if we continue them next session.

Beginners' meetings: The February Beginners meeting is on Monday 23rd February 2026 at 20:00 at the usual venue. Talks will include the Messier Marathon and The Science in Space films

European AstroFest 6-7th Feb 2026
Information at - https://europeanastrofest.com/

Practical Astronomy Show 7th March 2026
Information at https://practicalastroshow.com/

Mailing List: we have now moved to a new mailing 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.

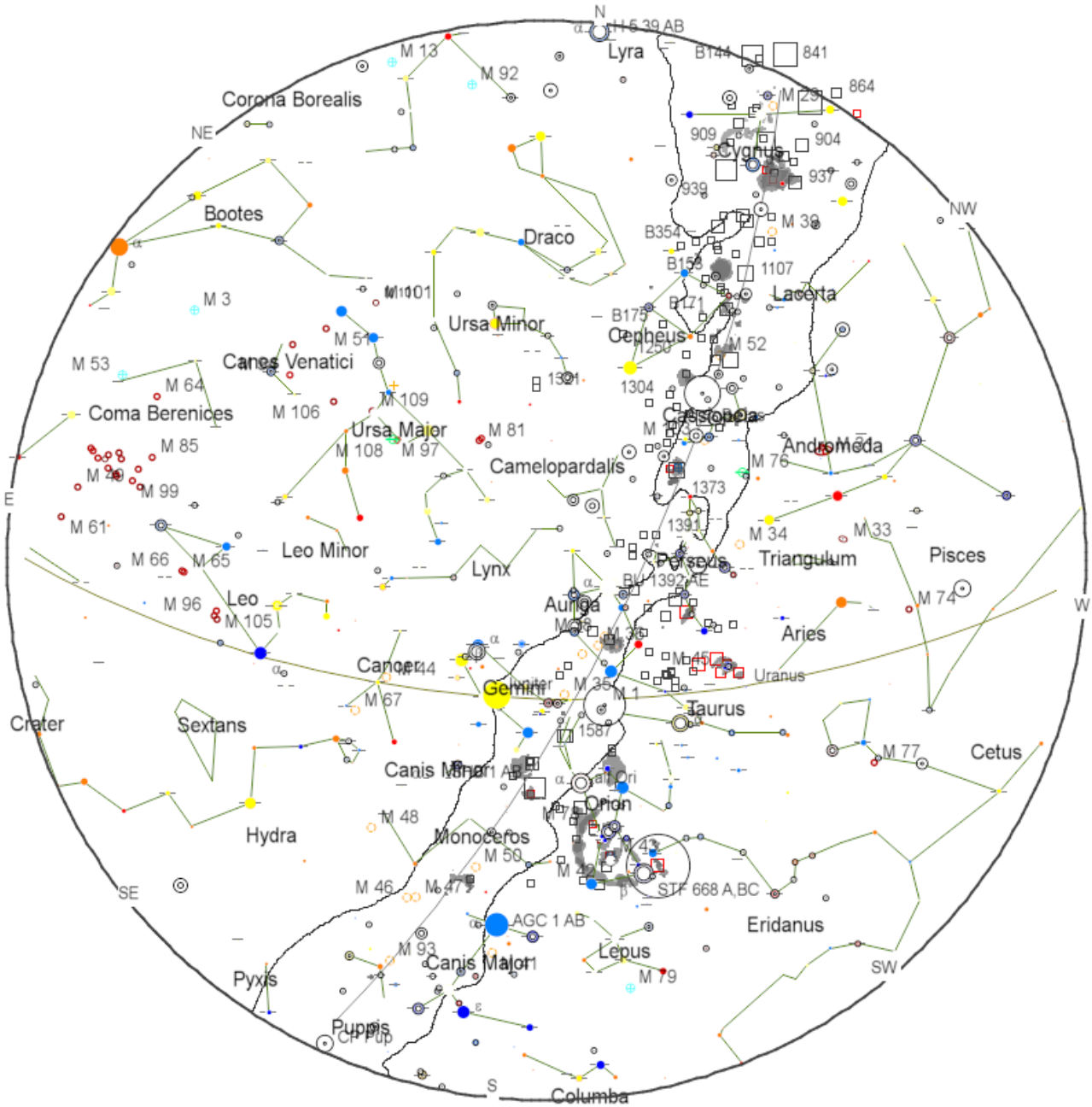
Group membership is primarily for current and/or recent members of Abingdon Astronomical Society. Those who are permitted to join the Group but do not become members of Abingdon Astronomical Society nor have been recent members may, in due course, be removed from this Group.
The Group is not listed in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

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

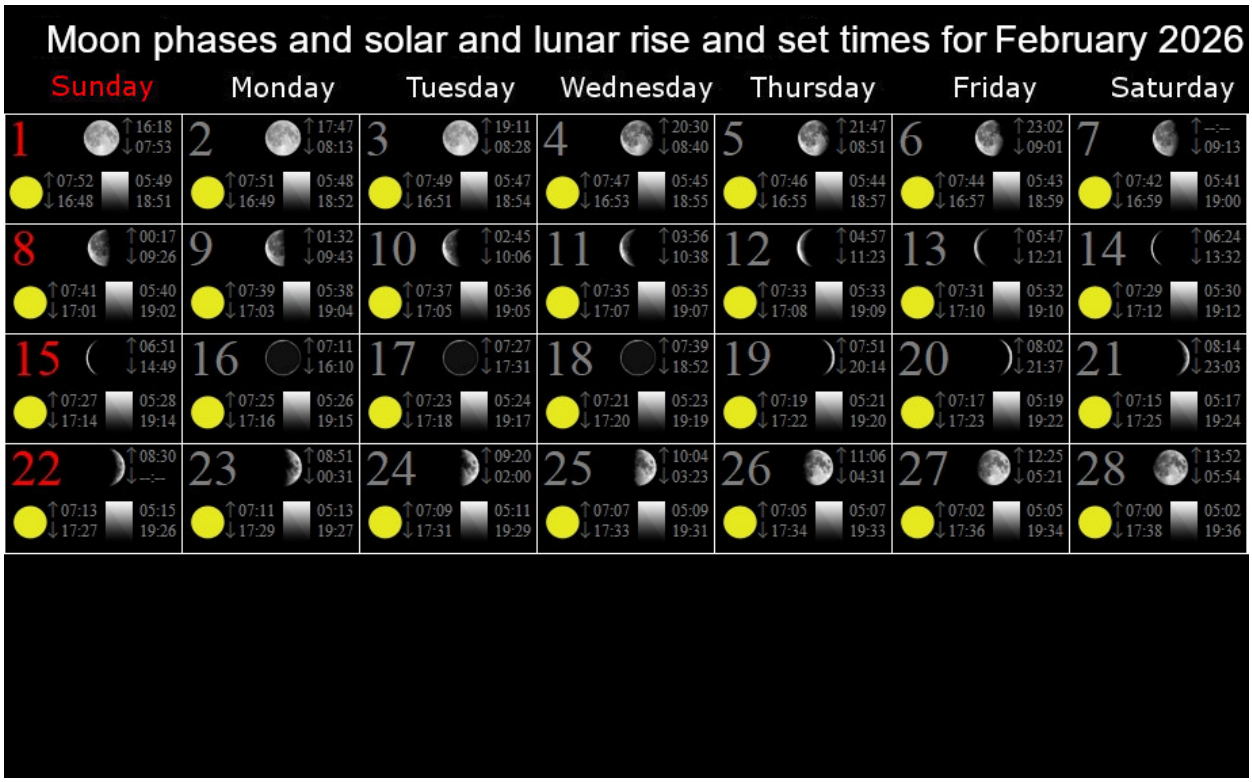
We have also setup a new WhatsApp group for real time announcements of astronomical/meteorological (NLC, Auroral) phenomena. The group is open to all members of the society. To join leave your mobile number with any member of the committee and you will receive an invite to join

STAR CHART

The night sky at 21:00 (UT) Friday 15th February 2026



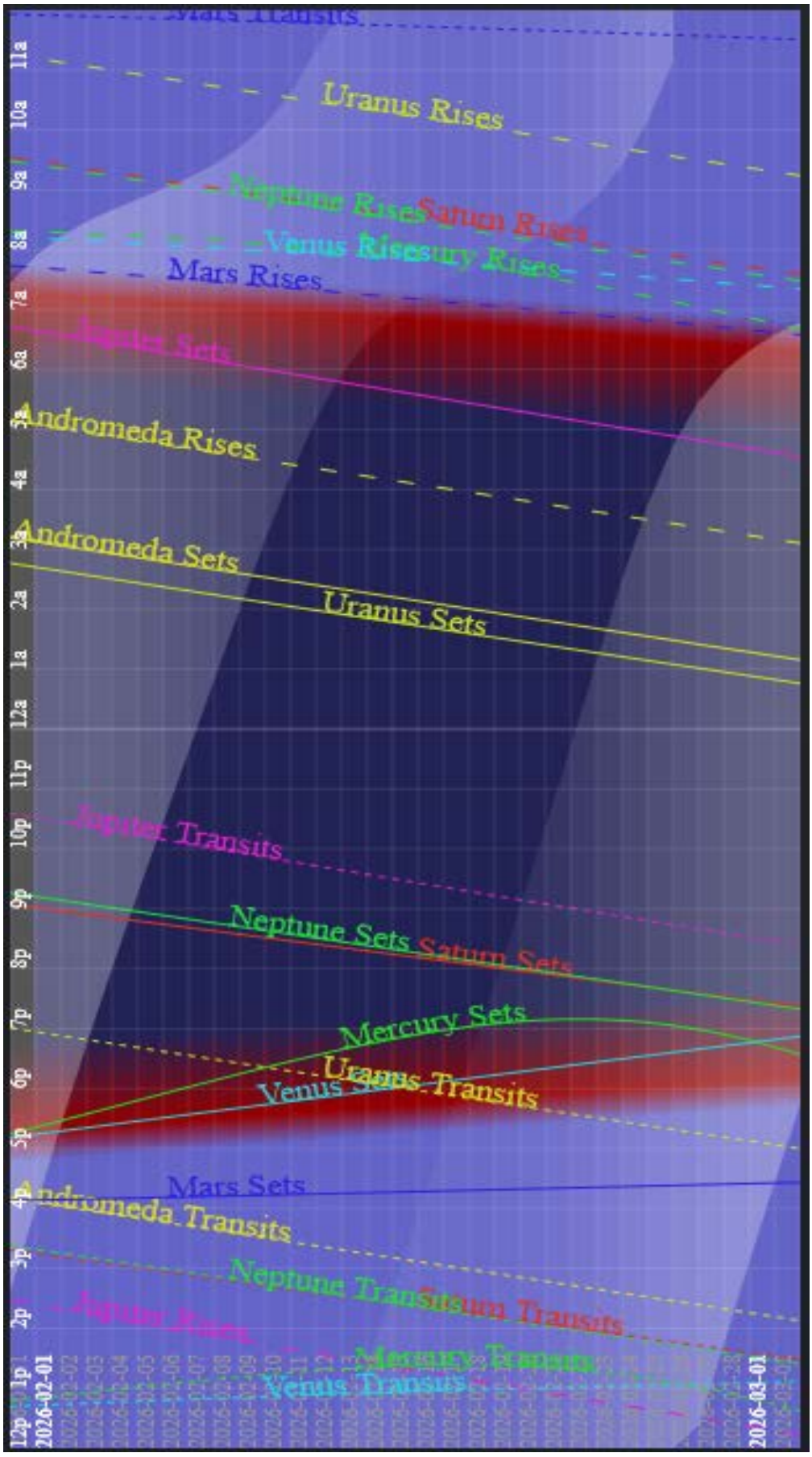
MOON PHASES FEBRUARY 2026



Artmis II

Beginners Meeting Talks 2025/26

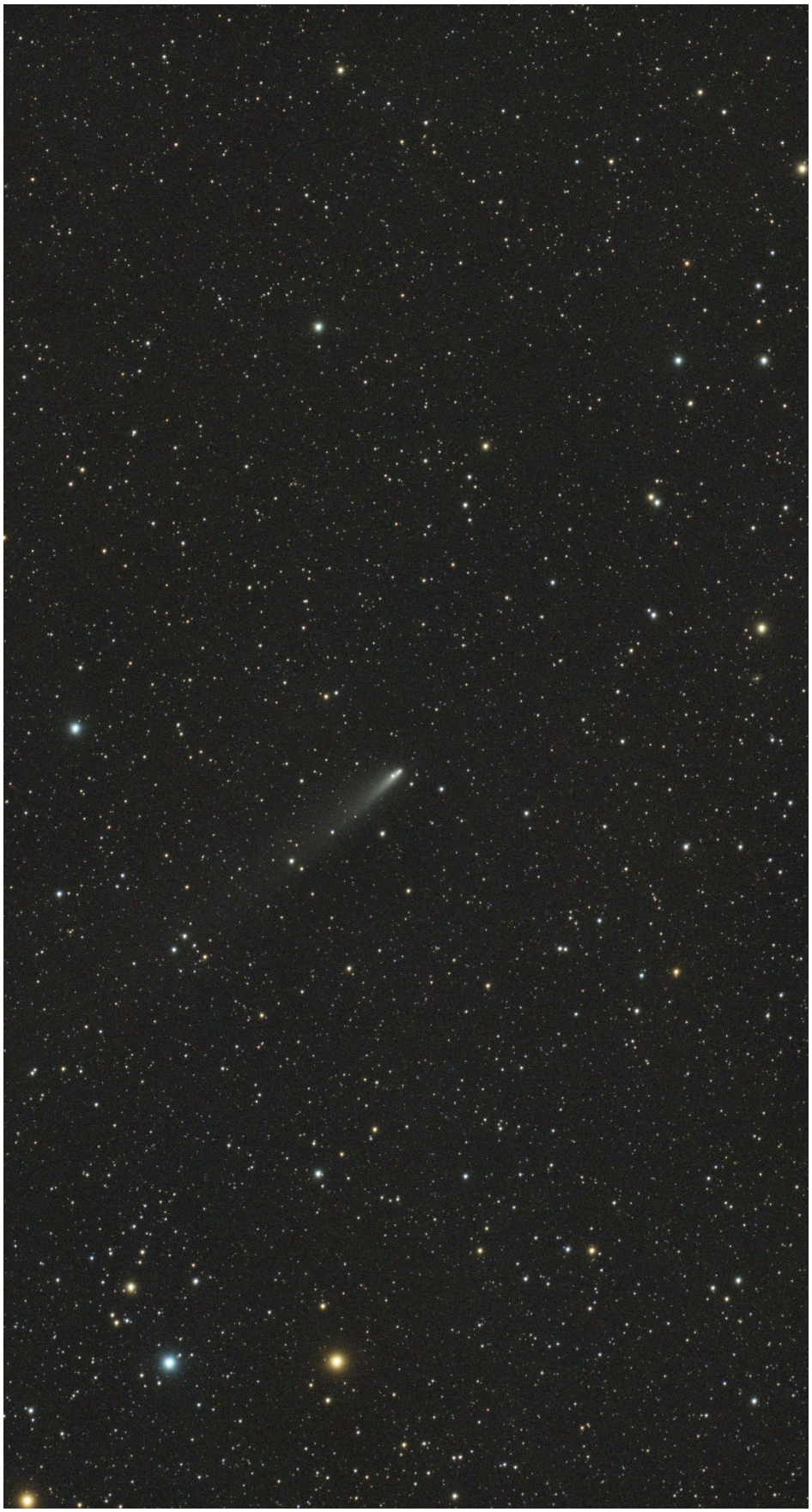
Date	Long Talk	Speaker	Long Talk	Speaker
SEP 29th	Whats Up	**Dan**	Eyepieces -	**Owen**
OCT 27th	Jupiter	**Ian**	NEO	**Bob**
NOV 24th	Xmas Meal			
DEC 1st	First Telescope	**Ian**	Orion	**Owen**
JAN 26th	Brown Dwarfs	**Dan**	Intro. to Solar System Imaging	**Chris Pickford**
FEB 23rd	The Science in Space films	**Cristina**	Messier Marathon	**Owen**
MAR 16th	Observing Planetary Moons	Bob	Weather Apps & websites	**Chris**
APR 27th	TBC	**Cristina**	Naming Astronomical Objects	**Dan**
MAY 18th	Local Galaxies	**Owen**	Setting Up an Equatorial Mount	**Chris**
JUN 15th	Solar Eclipses	**Bob**	Putting Together a Mobile Imaging rig	**Ian**



Planet rise and set times for February 2026

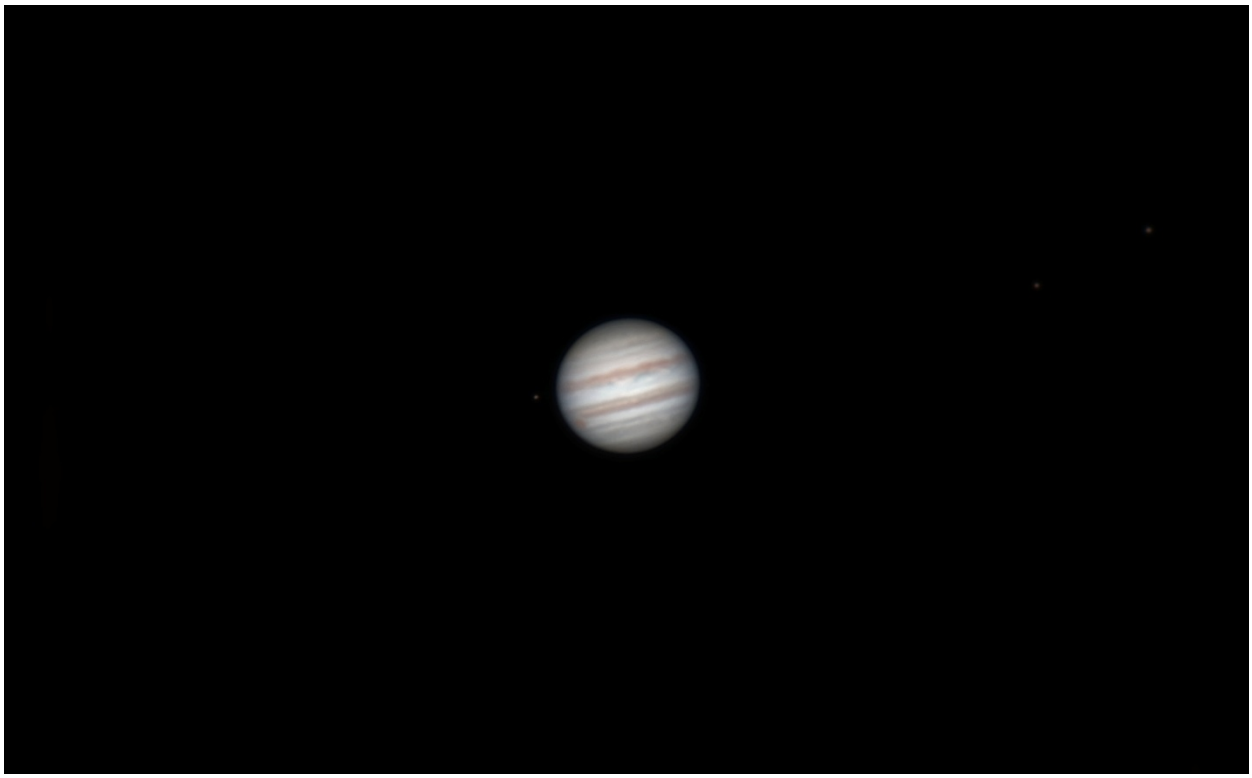
Recent images from Members

Moon – Steve Creasey



Comet C/2025 K1 (ATLAS) – Ian Smith 2025-11-29

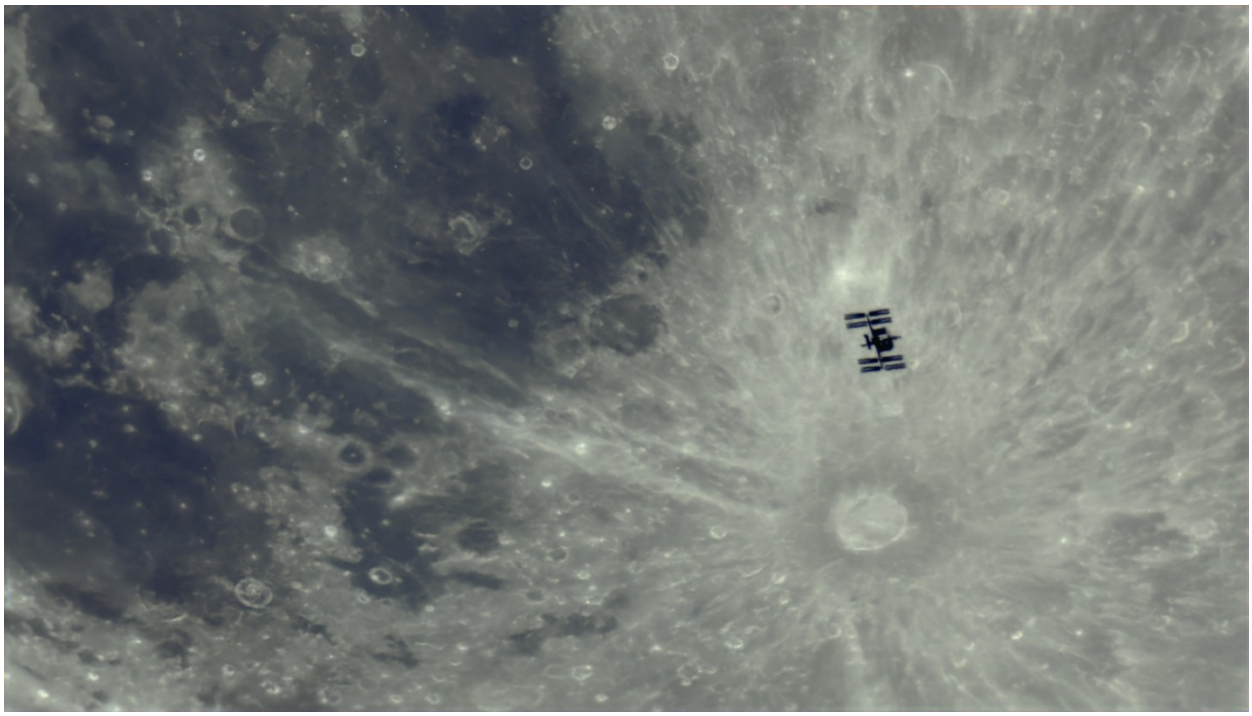
Comet C/2025 K1 (ATLAS) – Ian Smith 2025-12-09



Jupiter + Ganymede – Ian Smith

M31 – Seestar – Cristina from Spain

M33 + Eros – Seestar – Cristina from Spain



ISS over Tycho – Charline Giroud