

SPACEWATCH

the newsletter of the Abingdon Astronomical Society

MAIN Meeting

13th October 2025

Erwin Finlay Freundlich a collaborator
of Einstein's

Mike Frost
British Astronomical Association
Historical Section

EDITORIAL

Well as expected the Luar eclipse was clouded out as was the Pleiades occultation. A few pictures were achieved after totality for a short period. We did seem to have a run of clear skies at the end of the month, although not unfortunately at the star party I was at 😞 So I expect there will be a few decent images coming along, hopefully not of the same objects as usual for this time of year.

We have a chance of two decent comets this month. Comet C/2025 A6 (Lemmon) is brightening faster than expected and may be a binocular object at the middle of the month. It is currently around 6th mag or so in Lynx. I did manage some images of it from Kelling so they are later in Spacewatch. A recent discovery that has been putting on a show for southern observers (as usual) is C/2025 R2 (SWAN). It is coming north so if it survives may be a decent object at the end of the month. I note also that 3I/(Atlas) is also brightening faster than expected although it is now moving into conjunction with the Sun. It looks like most of the fleet of spacecraft going round Mars will be turned to look at it so it should be interesting to see what they find. 3I will become visible to us mid-November so hopefully more

interest then. We also have another Outreach event with Science Oxford on the 28th November so if you are interested in helping out at this please contact me. The previous attempt here was postponed because there was nothing to see and we did not have enough people to support it. I don't know if this will be inside Gant's congestion charge zone but I imagine that this will start putting people off doing things in Oxford. It would be interesting to know people's feelings on doing Outreach. I know many societies see this as a fundamental part of what they do but Abingdon AS has always been reluctant to get people out to these kinds of events and it has always been only a small handful of people that do it.

We do have a very busy October with events so keep an eye out for what is in the program. Also at the beginning of November we have the International Astronomy Show so any early Christmas presents can be got there before Rachel takes all your money away.

I see that the US is still planning to get Artemis II off around the Moon next year. It will be interesting to see if they manage it or it is postponed until 2027.

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

Septembers Meeting

Gwyneth Hueter

Namibia anyone? 'An Astronomy Guide in Namibia' was the talk given by ex Abingdon AS member Mark Radice (Basingstoke AS). He saw an advert on the Cloudy Nights message board asking for an expert to support guests at a lodge in the Namib desert. He was able to take a two month break from work (and work online where needed) and flew out via Frankfurt (Namibia used to have German connections) then on to the capital Windhoek then five hours of road/track travel to the and Beyond Sossusvlei lodge. He was there in September/October last year, 24° south and at the same longitude as the UK.

The landscape is quite Martian, and a deep borehole provides sufficient water for the lodge (and a swimming pool). A separate borehole has been created nearby and attracts the wildlife. There can be dust storms that look like Martian twisters too. Clouds show as black because there is no light coming from the ground below. The lodge's observatory has a Celestron 11" but has no roof (it hasn't rained for seven years so why should it?). Mark's routine is that he gets up early afternoon, then the guests join him after dinner and he spends the early evening observing with them. They retire to bed quite early because they have to get up around 4.30 am for their safari travels to avoid the heat of the day. We are talking about late Spring temperatures getting to 40°C. The January Astronomy Now gives a well-illustrated account of his stay, along with his observing records and sketches and the kit he took with him (90mm Megrez + camera ZWO AM3, binoviewer, Baader Hyperion zoom eyepiece, Harmonic mount for small telescopes, which doesn't need a counterweight. The optical stuff is small enough to be cabin luggage.).

On his first night he was confused by the extreme lack of light pollution when he saw the zodiacal light reaching across the sky and blending into the Gegenschein. The odd light balance also confused his old Sony digital SLR. He took a time lapse of our neighbour group, α Centauri, nearly 2° from Proxima. He took a series of shots of the Moon as it went from new to full Moon. He also did some lunar observations (yes!), and did some sketches. He got the Titan shadow transit of Saturn of November 20 (photos in Astronomy Now, taken through thin cloud but still excellent.). Jupiter was high. He got spectacular views of comet C2023 A3 both before and after perihelion. His preferred globular was 47 Tucanae, which is not as dense as Ω Centauri and so could be resolved clear to the core. He sketched the LMC through 8x30 Swarovski binoculars (provided in the lodge) and used the C11 to sketch the Tarantula Nebula.

He really sold the place. There was the option of a hot air balloon flight as well as trips out. He just warned us about the wildlife that came near to the lodge could get too near - jackals would pinch your running shoes if you didn't bring them in at night. You checked your stuff for scorpions before you took it back to your room. The doors were set quite flush to the floor so you were unlikely to get visitors at night.

What's up for October 2025

Steve Creasey and Cristina Garcia Pozuelo Sanchez

As the evenings are now getting darker at a reasonable time, it's much easier to get out and have a look at the fantastic night sky we have this time of year. The autumn sky gives us the best of both worlds, with the summer constellations to the West, with all the amazing Nebulae and Star clusters associated with the Milky Way, and then looking East we see Pegasus and Andromeda before the precursor to the winter constellations, the Pleiades comes into view, followed a little later by Taurus and Orion, and the thousands of galaxies that are visible to us in the winter skies through our cameras and telescopes.

Don't forget the clocks go back, marking the end of BST on Sunday the 26th.

The Planets

Mercury – Mercury will be visible in the evening sky during the first part of October. It will reach its greatest Eastern elongation on the 29th of October, making it a good time for observation.

Venus - In October, Venus is a morning object — it is visible before sunrise, in the eastern part of the sky. It rises a few hours before the Sun, gradually getting harder to see as the month progresses (because it gets closer in angle to the Sun).

By late October, its rise before sunrise will be earlier relative to sunrise than at the start of the month. This gives a better window for seeing it in darker skies.

Notable Dates - 19 October is especially good: there is a close approach / conjunction of the waning

crescent Moon and Venus in the early morning sky. They'll be visible rising together from the east before sunrise.

Over the month Venus remains easy to spot in the dawn sky, but the Moon-Venus event on the 19th stands out as a beautiful sight.

Mars – On 19 October 2025, Mercury and Mars will appear in a conjunction in the evening sky just after Sunset. Mars will shine at magnitude +1.5, and Mercury is much brighter (mag -0.1)

On 23 October 2025, the thin crescent Moon, Mercury, and Mars will be visible together shortly after sunset near the western horizon — they will set about an hour after sunset.

Jupiter - At the start of the month, Jupiter rises in the northeast around 23:00 BST, meaning Jupiter will be best seen as a morning object in October.

By the end of October (after daylight saving time transitions), it will rise earlier, around 20:00 GMT (i.e. late evening) and then climb higher in the sky.

Jupiter will reach a high altitude (up to ~ 58°) under dark conditions later in the month.

On 13 October, the Moon and Jupiter are in conjunction (i.e. the Moon passes near Jupiter), making it a nice night to spot Jupiter near the lunar crescent.

The best time to view Jupiter will be just before dawn, when Jupiter is highest in the sky and the sky is still dark.

Use binoculars or a telescope if possible — Jupiter's cloud bands and its Galilean moons are visible under modest magnification.

On nights around October 13, the proximity of the Moon can help you locate Jupiter more easily.

Saturn - is well placed for evening viewing in October 2025.

It will appear in the southeast after sunset, gradually moving higher toward the south as the night advances.

At the beginning of October, Saturn is lower in the sky but it stays visible for many hours — into the late night / early morning.

By the end of the month, it will reach a better altitude in the evening sky, though it will set earlier (around 01:00 GMT).

There is a Moon–Saturn conjunction early in the month: on 6 October the Moon passes near Saturn, offering a useful guide to find it.

Saturn's opposition (when Earth is between Saturn and the Sun, making Saturn brightest and visible all night) occurred in September 2025, so October is still within a good observing window post-opposition.

Uranus - Uranus is visible as a well-placed morning planet, reaching an altitude of about 57° under darkness.

It rises in the North East just after sunset, earlier as the month goes on. It moves higher into the southern sky before disappearing in the west at dawn, so best views will be at its highest point, around 03:00 BST at the beginning of the month and 00:00 GMT at the end of it.

When due south (culmination), Uranus may reach altitudes of 44° (in the UK) around 1:30 BST in early October.

October is a very good month to try to observe Uranus.

Best Times & Positions to Look

Uranus reaches opposition in November 2025 (i.e. is opposite the Sun in the sky, hence visible the entire night). Opposition occurs on 21 November at noon.

The best time to view Uranus is when it is near its highest altitude (culmination, when it crosses the local meridian), that is around 03:00 BST (early in the month) and 00:00 GMT (later in the month).

Uranus is faint — its magnitude is around +5.7, which is near the limit of naked-eye visibility under excellent dark conditions.

Neptune - Neptune reached opposition on 23 September 2025

Opposition is when Neptune is opposite the Sun in our sky, meaning it rises around sunset, is highest near midnight, and sets around sunrise — giving the longest and brightest viewing window.

In October, Neptune remains well placed for much of the night.

Neptune is shining at about magnitude +7.8 and is visible (with a telescope) for most of the night in Pisces. Neptune is too faint to be seen with the naked eye.

It follows closely behind Saturn in the sky, rising and setting at almost the same time.

Additionally, there is a close approach / near conjunction of the Moon and Neptune on 6 October 2025 (the Moon will be within 2°29' of Neptune). This can help as a “pointer” to find Neptune, though the Moon's brightness will also make seeing faint objects harder.

Meteor Showers

The Taurid meteors consist of 2 streams, the South Taurid meteors and North Taurid meteors. Both streams appear to originate from the constellation of Taurus. The comet stream is very spread out and dispersed, which is why it takes the Earth a relatively long time to pass through. It is also why we see two separate segments of the shower: the South Taurids (10 September - 20 November) and the North Taurids (20 October – 10 December). The North and South Taurids are two fragments of the same debris cloud and they are similar in density, so the peaks are about the same. You might see South or North Taurids throughout October and into November.

The Orionids - The New Moon in October 2025 occurs on 21 October at around 12:25 UTC. Therefore, on the night of 22 October (peak), the Moon will be a very thin waxing crescent, with only about 2% illumination. Because the Moon will be so faint and likely set (or be very low) during much of the night, moonlight interference will be minimal — making it a good year for observing Orionids. On a dark, moonless night, the Orionids exhibit a maximum of about 10 to 20 meteors per hour.

Comets

We could be lucky this month with two bright comets in the sky. Comet C/2025 A6 (Lemmon) has been around for a while now but is brightening towards it is perihelion mid-month and should be a binocular object. I have included a chart of its position through the month later in Spacewatch as well as a couple of images taken with a Seestar (actually both Seestars 😊) on the morning of the 29th.

Comet C/2025 R2 (Swan) has been putting on a performance for southern hemisphere observers but is coming north and could be a binocular object in

the evening skies later in the month. Again, I have put a chart showing its location during the month later in Spacewatch

Deep Sky Objects

NGC 7479 – The Superman Galaxy, 105mly away in the constellation of Pegasus

NGC 7331 – A Barred Spiral Galaxy, 50mly away in Pegasus, the brightest in The Deer Lick Group.

NGC 6905 – The Blue Flash Nebula, a planetary nebula in the constellation of Delphinus

NGC 247 Intermediate spiral galaxy 11mly away in Cetus, it is a member of the Sculptor cluster.

M15 The Great Pegasus Cluster – Globular cluster

NGC 6992 The Eastern Veil Nebula in Cygnus
IC 3568 The Lemon Slice Nebula, Planetary nebula in Camelopardalis

NGC 6543 The Cats Eye Nebula, Planetary nebula in Draco

NGC 40 The Scarab Nebula, Planetary nebula in Cepheus

NGC 188 Open Cluster in Cepheus

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: There is a beginner's meeting on the 27th October at the usual venue starting at 20:00. Talk titles to be on Jupiter and NEO's topics as always subject to change depending on speaker availability.

Observing Evening and Telescope Workshop 20th October at Wootton and Dry Sandford Community Centre

8:00 pm - 10:00

1st November – International Astronomy Show. See details at <https://www.ukastroshow.com/>

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.

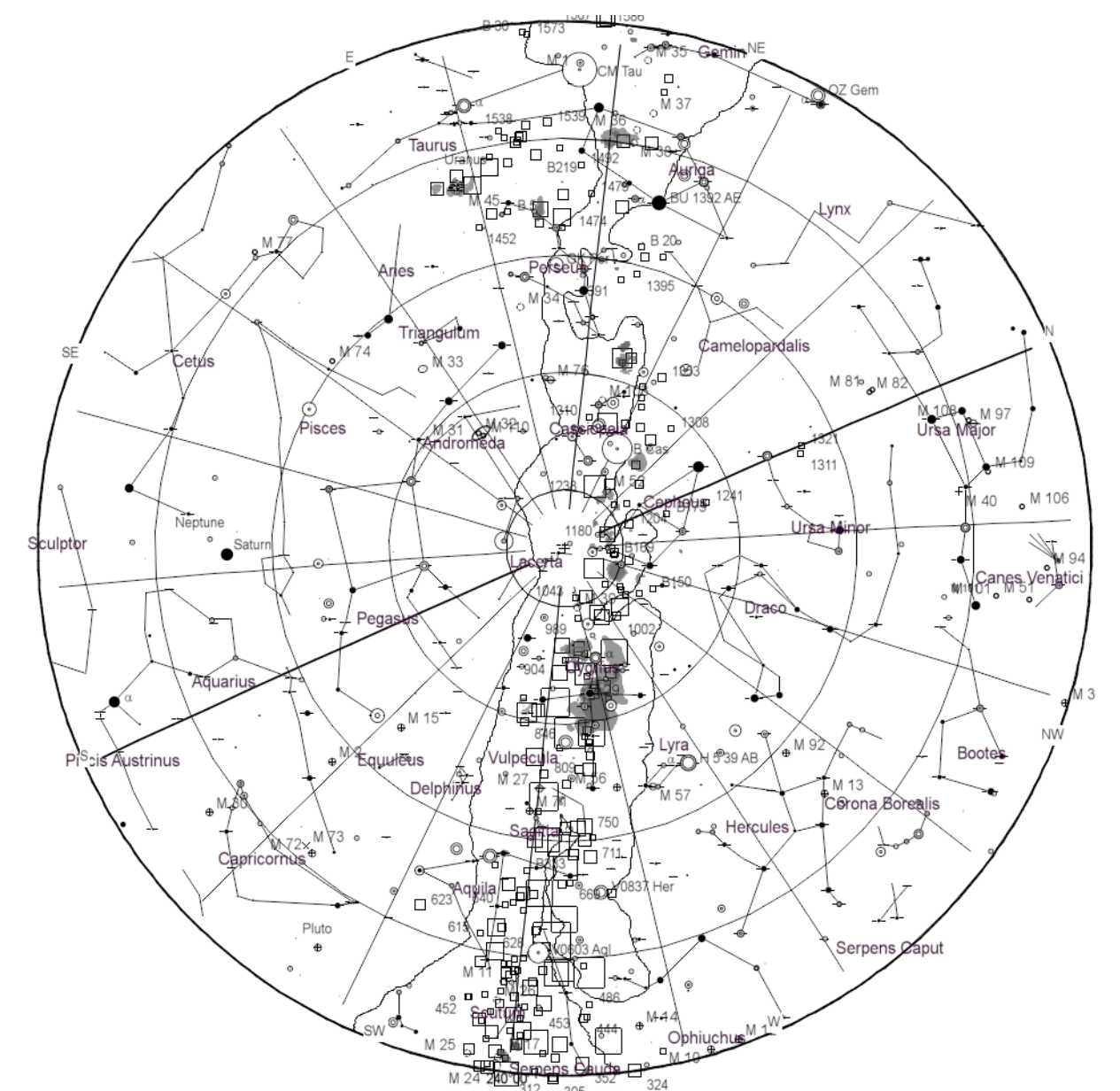
Members of the current aaslist should have been invited to join but if you have not then you can subscribe from the website

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) Wednesday 15th October 2025

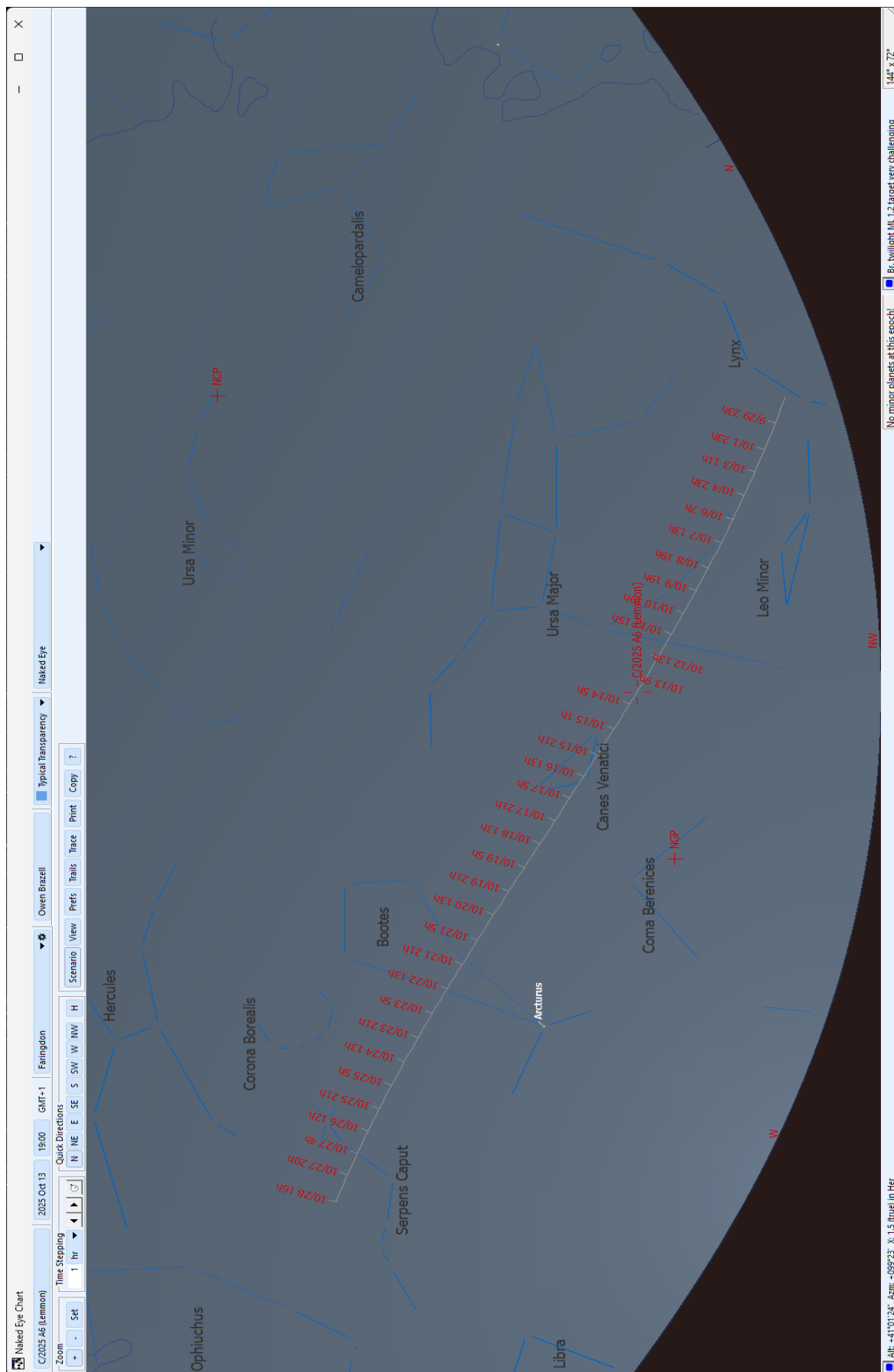


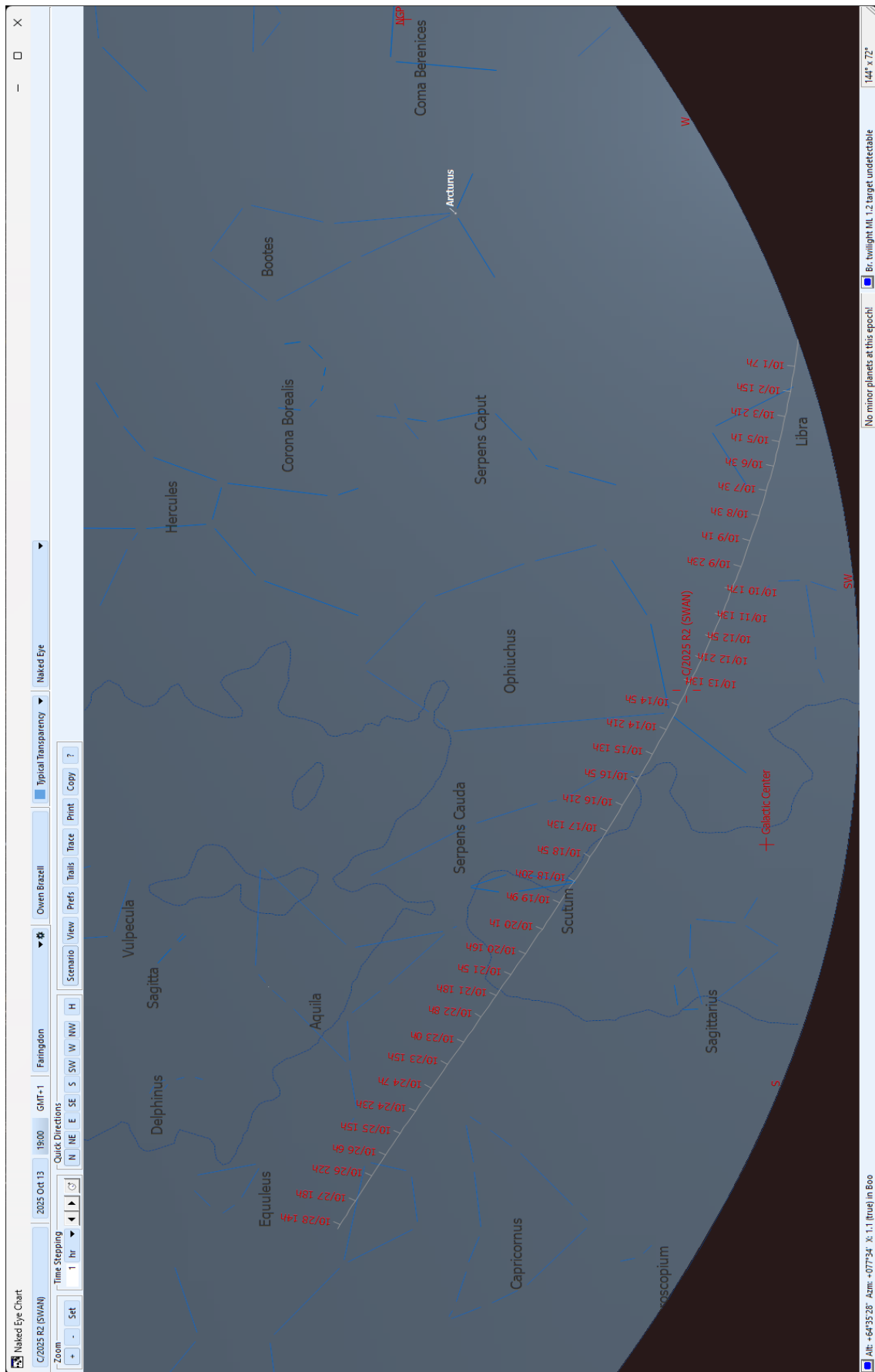
MOON PHASES OCTOBER 2025

Moon phases and solar and lunar rise and set times for Oct. 2025						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1  ↑ 16:49 ↓ ---	2  ↑ 17:11 ↓ 00:28	3  ↑ 17:28 ↓ 01:51	4  ↑ 17:42 ↓ 03:16
5  ↑ 07:20 ↓ 18:28	6  ↑ 07:22 ↓ 18:25	7  ↑ 07:24 ↓ 18:23	8  ↑ 07:25 ↓ 18:21	9  ↑ 07:27 ↓ 18:19	10  ↑ 07:29 ↓ 18:16	11  ↑ 07:30 ↓ 18:14
12  ↑ 07:32 ↓ 18:12	13  ↑ 07:34 ↓ 18:10	14  ↑ 07:36 ↓ 18:08	15  ↑ 07:37 ↓ 18:05	16  ↑ 07:39 ↓ 18:03	17  ↑ 07:41 ↓ 18:01	18  ↑ 07:43 ↓ 17:59
19  ↑ 05:20 ↓ 17:12	20  ↑ 07:46 ↓ 17:55	21  ↑ 07:48 ↓ 17:53	22  ↑ 07:50 ↓ 17:51	23  ↑ 07:51 ↓ 17:49	24  ↑ 07:53 ↓ 17:47	25  ↑ 07:55 ↓ 17:45
26  ↑ 06:56 ↓ 16:43	27  ↑ 06:58 ↓ 16:41	28  ↑ 07:00 ↓ 16:39	29  ↑ 07:02 ↓ 16:37	30  ↑ 07:04 ↓ 16:35	31  ↑ 07:06 ↓ 16:33	
Times in BST until 26th.						

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	TBC	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





Track for C/2025 R2 (SWAN) during October

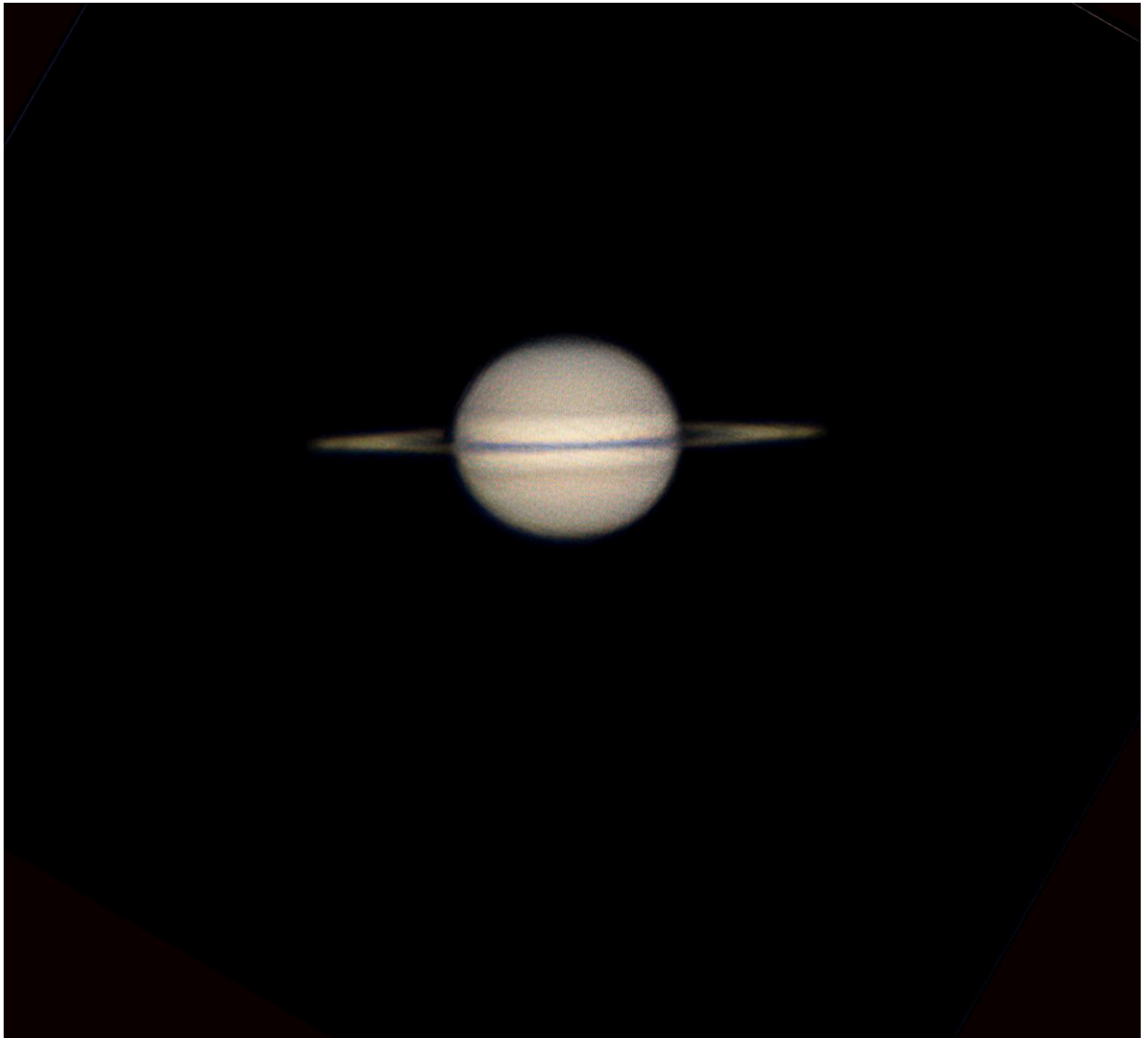
Recent images from Members



Lunar Eclipse – Owen Brazell – Seestar S50



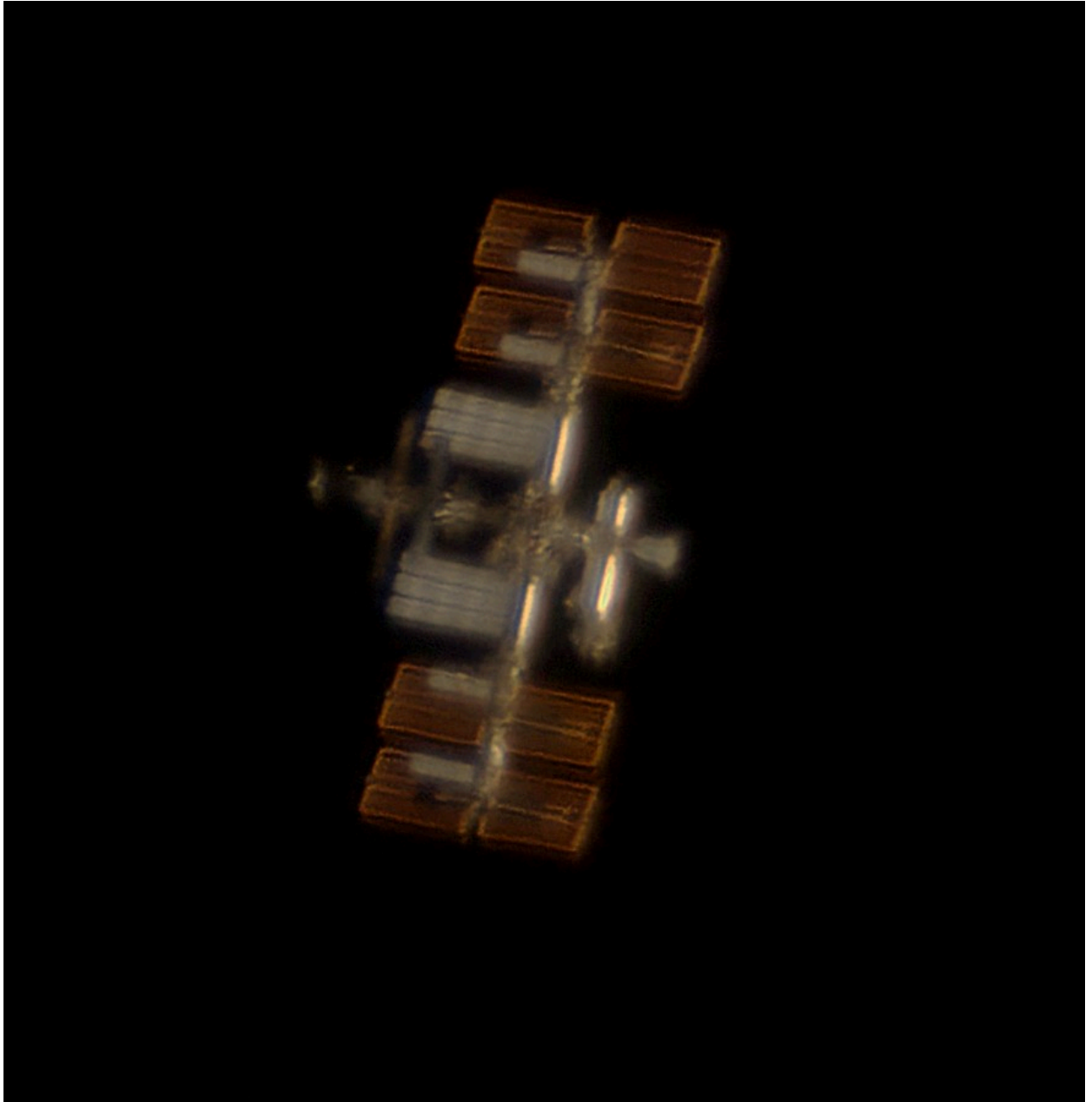
Iris Nebula – NGC 7023 – Clifford Marcus



Saturn – Chris Pickford



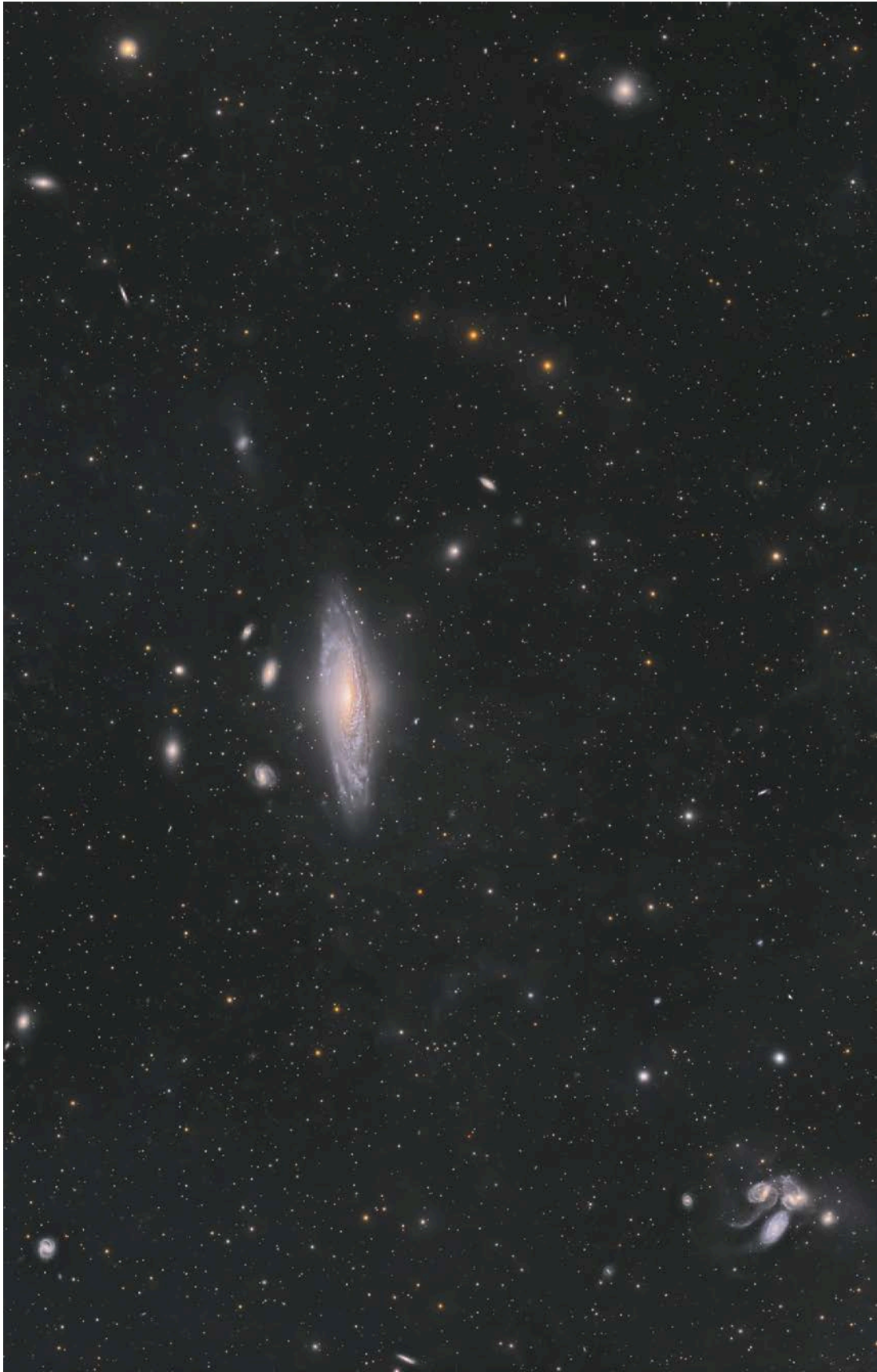
SH2-132 – Acapulco Rolf



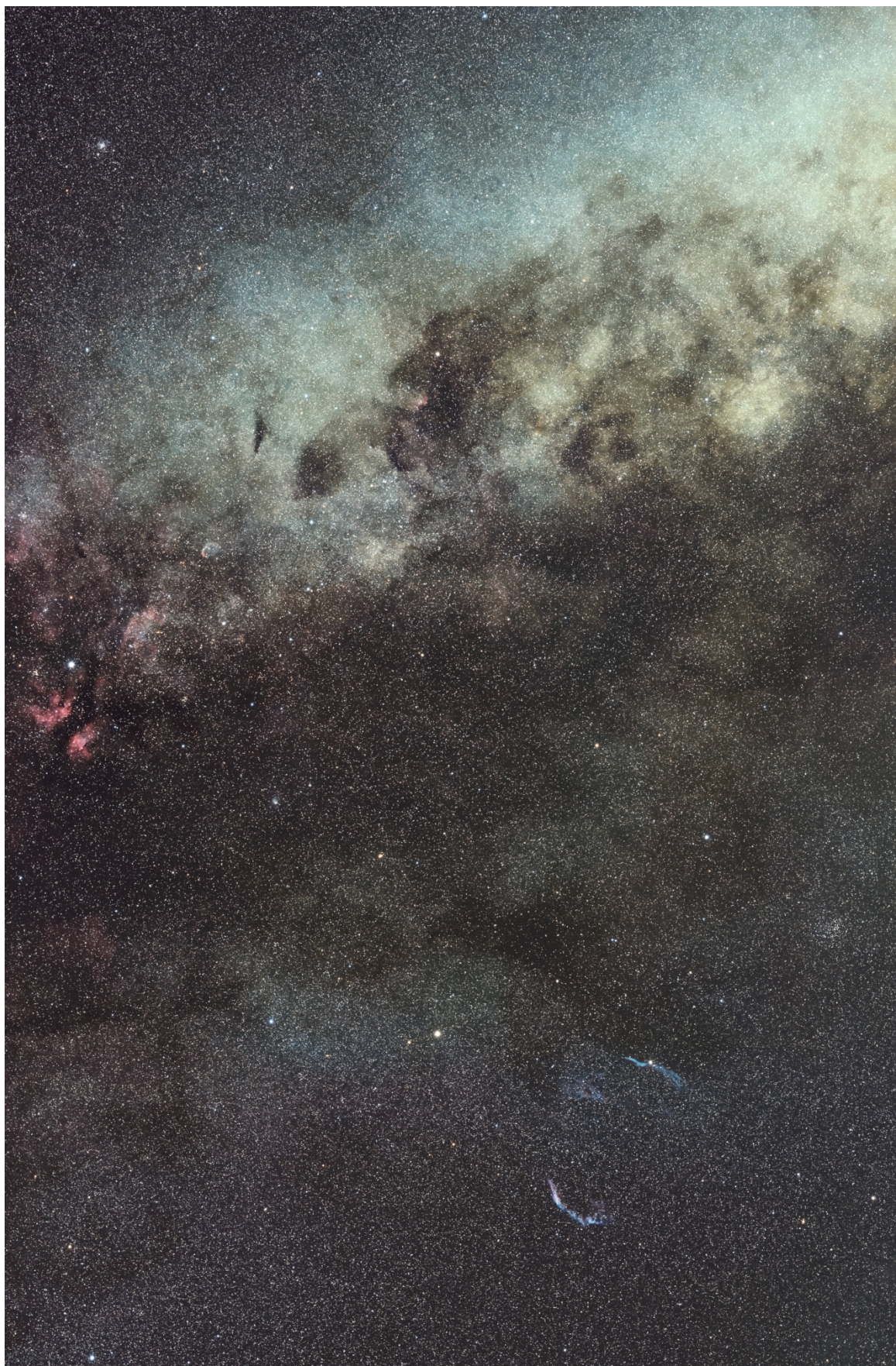
ISS -Charline Giroud



Saturn with Rhea shadow – Chris Pickford



NGC 7331 and Stephans Quintet – Roland Gooday



Sadr region of Cygnus – Roland Gooday



NGC 6765 – Ian Smith



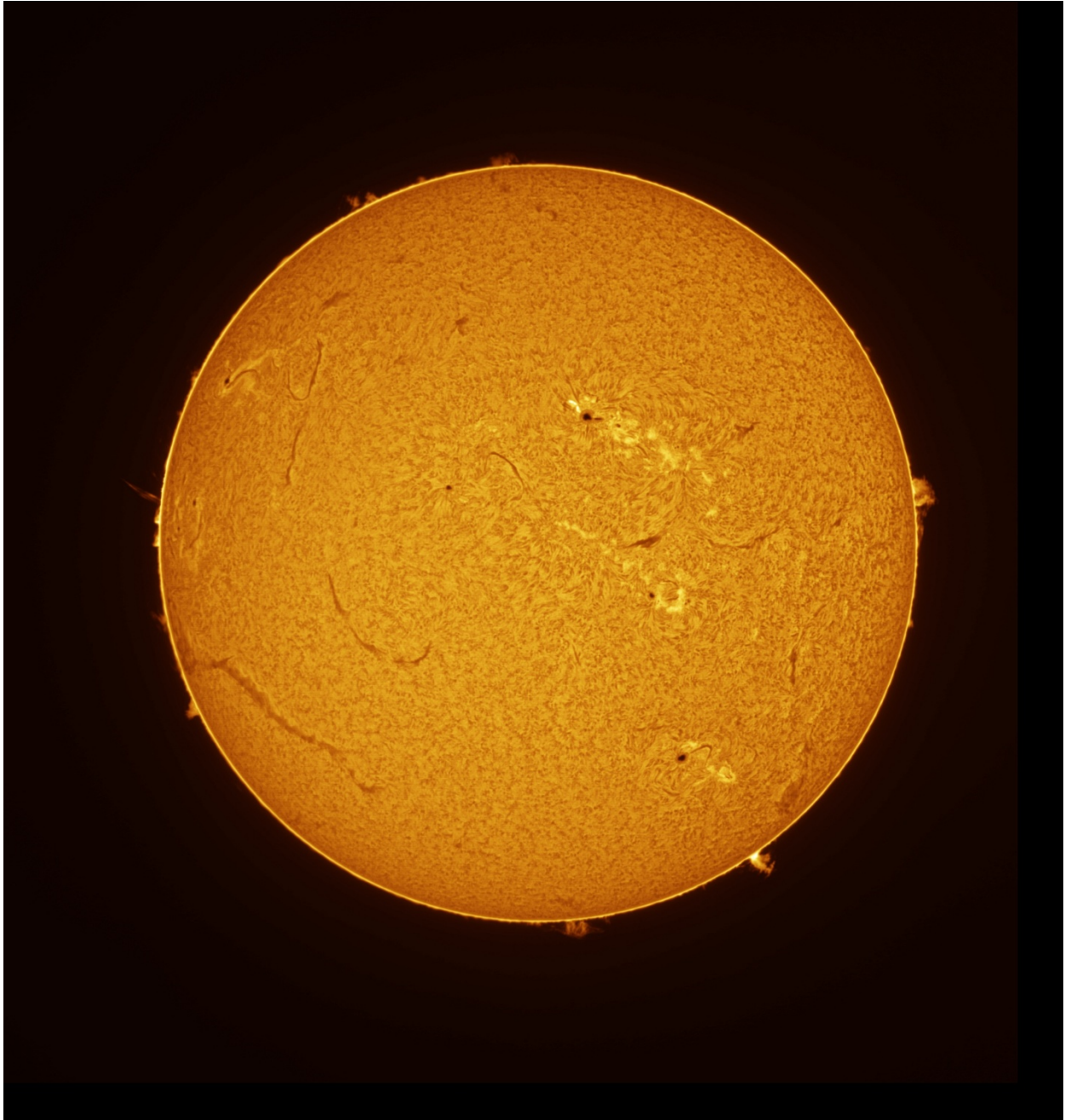
Sun H-Alpha – Ian Smith



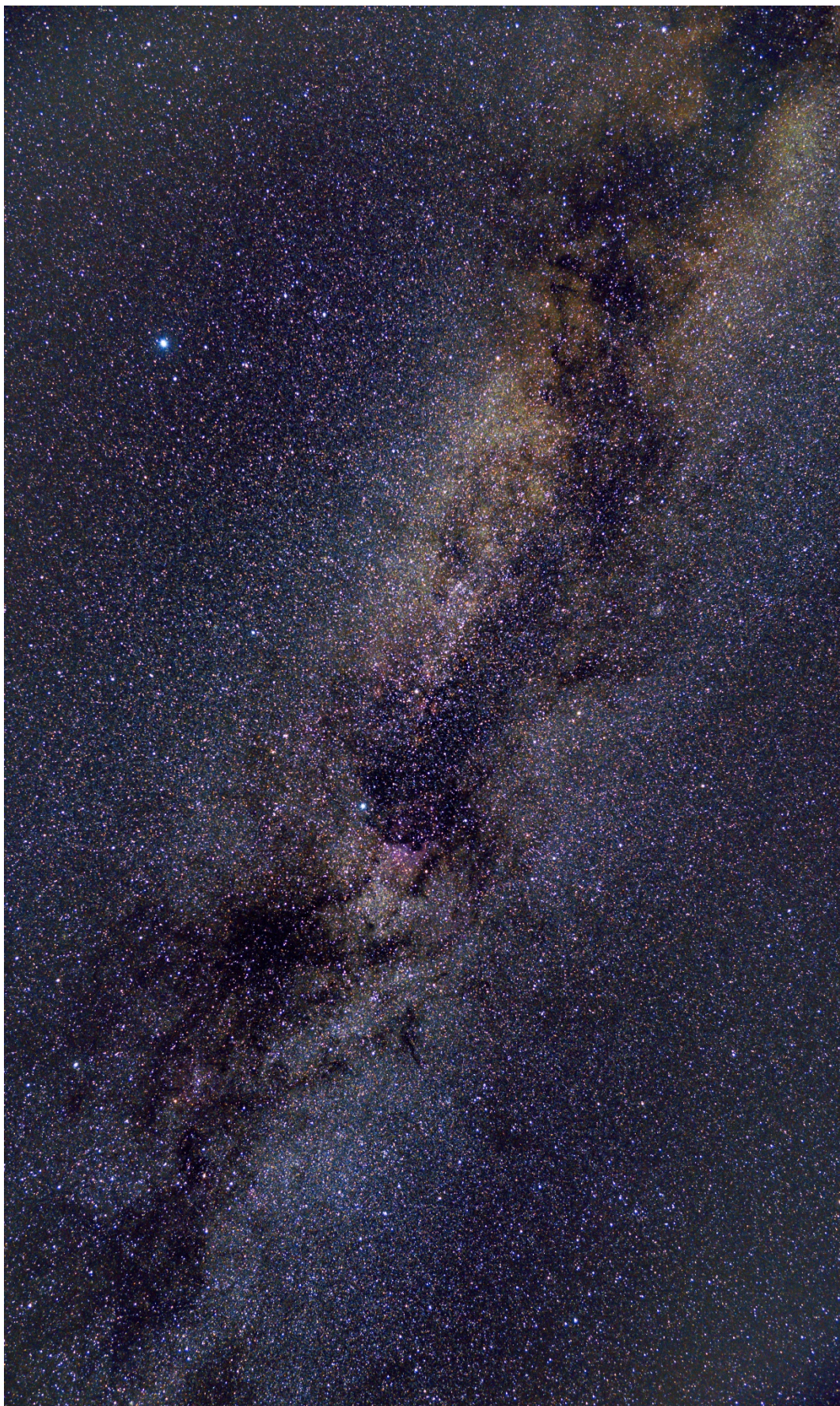
Sun – Ian Smith



Sun – Ian Smith



Sun – H-Alpha – Ian Smith



Milky Way – Stanford – Steve Creasey



C/2025 A6 (Lemmon) Owen Brazell



C/2025 A6 (Lemmon) – Owen Brazell