

Lewes Astronomical Society

Newsletter

November 2026

LAS Newsletter: November 2026

Editor: Chris Taylor

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1 Introduction

Welcome to the November 2026 LAS Newsletter, and thanks to everyone who has contributed to it (in particular, to Judith Pyett for the following obituary, and to Nick Quinn for his personal account and images of the 12th August total solar eclipse as seen from Greenland, in section 8).

1.1 Obituary: Keith Arthur Brackenborough (1943—2026)

We are saddened by the death of former Eastbourne AS Chairman, Keith Brackenborough, who died recently in a care home near family in Weybridge, Surrey.

Astronomy was Keith's lifelong passion. An early member of Croydon AS, he became the Junior Members' first Variable Star Section Director in 1961, following a suggestion from Patrick Moore. He became CAS Chairman in 1965 and helped secure its permanent home near Kenley Airfield, with land donated by his godparents.

During the 1970s, he ran AstroBooks from his South Croydon home, providing a specialist service when astronomy books were difficult to obtain.

In 1973, he joined the BAA's solar eclipse expedition just off the coast of Mauritania, West Africa, aboard the Monte Umbe. The expedition featured on The Sky at Night. After joining Eastbourne AS in 2000, Keith became its Librarian, Archivist and Historian. He later took on the role of Chair until ill health recently forced him to step down.

Keith gave invaluable advice and encouragement in helping us establish the Lewes AS in 2022, willingly sharing expertise and advice. In March 2023, he gave a talk to the LAS titled "The Rise and Fall of an Observatory at Herstmonceux".

Keith will be remembered for his dedication to astronomy, his knowledge of its history and his lasting contribution to the societies he served. Our thoughts are with his family and friends.

2 Recent events

2.1 Subud Centre meeting (7th October)

Ian Whiteley talked on "Stars & Stoolball; A Short History of Herstmonceux Observatory", including its postwar construction as a new home for the scientific staff of the Royal Observatory at Greenwich, its decades-long research role, its eventual closure as a research site, and its conversion into the current Observatory Science Centre and Museum (OSC).

2.2 Peak of Orionids meteor shower (21st/22nd October)

The Orionids meteor shower (see this NASA webpage) peaked over the night of 21st/22nd October; its radiant (the point that its meteor trails point back to) is in Orion, and the source of its debris stream is Halley's comet. A week or so earlier, your Editor saw two possible Orionids (see this American Meteor Society calendar), whilst observing Neptune, Uranus, and the asteroid Vesta with 15x50 image-stabilized binoculars, guided by star fields on Stellarium.

2.3 Lunar occultation of the Pleiades (27th/28th October)

Over the night of 27th/28th, the dazzling, still almost Full Moon partially occulted the Pleiades star cluster. At 9:30pm on the 27th, the Moon and the Pleiades were well apart, but the Moon moved rapidly against the stars, and with binoculars at 1:30am on the 28th, your Editor could see only Atlas, Alycone, Merope, and Electra (scroll down on this page to see them), with the other main Pleiades stars either lost in the Moon's glare, or occulted.

2.4 LAS visit to the Science Museum, London (29th October)

This visit related to Isaac Roberts (1829–1904), a Welsh engineer, businessman, amateur astronomer, and pioneer of long-exposure tracking-telescope photography of faint nebulae and star clusters. See this Wikipedia page and this biography. As this page from the Graham Dolan's website on the Royal Observatory explains, after retiring as a wealthy man in 1888, Roberts was free to practise astronomy full-time. He paid Sir Howard Grubb of Dublin for a 20-in photographic Newtonian reflector and equatorial mount, with a 7-in refractor made by Thomas Cooke & Son of York being used as a counterweight and finder-scope for the 20-in (although the two telescopes could be set to different declinations if needed), an arrangement known as a "twin equatorial".

Initially the twin equatorial was set up near Liverpool, but in 1890 Roberts moved it to his new home with a built-in observatory at Crowborough. After he died in 1890, it was acquired firstly by another wealthy amateur, J.G. Bowers, and then in 1936 by the Science Museum after Bowers had died. From October 1956 to July 1961, it was on loan to the Royal Observatory's new post-war site at Herstmonceux (located in Dome C), but was then returned to the Science Museum in London, where it has since remained.

Thanks to Paul Whitmarsh and Jane Penny for organizing this visit, and to Angela Mascolo, Collections Co-ordinator of the Science Museum's Curatorial Services, for liaising with them. Thanks also to Laura Joy, the Museum's Curator of Mathematical Sciences, who met us all at the group entrance and showed us around. Laura took three small groups up to a small observatory dome on the roof of the Museum (not open to the public), where the twin

equatorial is now located. Unfortunately Paul was unwell on the day and unable to come, but Laura has kindly offered to show him the site at a later date. Laura is lead curator on a new science gallery at the Museum, expected to open in early 2027; the LAS wishes her and her colleagues good luck with that exciting project.



Photo taken by Christine Robinson of the twin equatorial of Isaac Roberts, with the 20-inch reflector on the left, and the 7-in refractor on the right.

3 Upcoming events

See https://www.lewesas.org.uk/events for details and updates on upcoming LAS events (weather-dependent events may be cancelled).

3.1 Subud Centre meeting (4th November)

Paul Whitmarsh and Taylor Hughes will talk at the Subud Centre (Talbot Terrace, Lewes, BN7 2DS; what3words: ///tripled.collide.flattens) on "Adventures with a Smart Telescope & Entry Points to Astrophotography" (non-members £4; doors open at 7pm; talk starts at 7:30pm). Their talk will cover: what cheap equipment can do; how to use your current equipment well; what smart telescopes can do; how to build a dedicated astrophotography rig; common pitfalls; and how to decide what kit to buy as you learn more.

3.2 Observing evening at Barcombe Village Hall (7th November)

This event will be held at Barcombe Village Hall (Barcombe Mills Rd, Barcombe, Lewes BN8 5BH; what3words: ///surprised.marked.woke), 8:30pm–11pm winter time, weather permitting (attendees should check the LAS events webpage two hours beforehand). Please park on the right-hand side of the car park, leaving the rest of it free for telescopes. If entering the Hall to use the toilets, please remove your shoes first. Warm clothes, your own snacks and thermos flask with a hot drink, and a red-light torch, are recommended.

3.3 Lewes STEM Fair (15th November)

The LAS will have a stand at this free event, open to all and held in Lewes Town Hall (High Street, Lewes, BN7 2QS; what3words: ///large.picnic.basket), 11am–3pm. Thanks to LAS President Professor Stephen Wilkins of Sussex University for his big part in this event and all his other STEM outreach work.

4 This month's topic links

This section lists a small selection of interesting links from various sources.

4.1 Links from the WhatsApp feed

The following is just a small sample (posters of the links credited in brackets):

- "Rethink ... what we put in space" (Robert M.): radio episode on BBC Sounds which investigates the large and rapidly increasing number of satellites in low Earth orbit, and its possible consequences.

- Has a nineth Solar System planet been found? (Gerard F.): article in the BBC Sky at Night Magazine, discussing possible new evidence that a remote nineth planet exists in the outer Solar System.
- 13 mins: Trouble with Hubble (Chris T.): Season 5 of the BBC's 13 minutes series of radio podcasts, presented by Dr Maggie Aderin, on the Hubble Space Telescope, still in orbit and delivering great images (try clicking on "What did Hubble see on your birthday?").
- Night Maps (Anthony G.): "A major exhibition exploring the visual and intellectual history and the real-world consequences of mapping the night sky" at the Warburg Institute (Woburn Square, London WC1H 0AB; what3words: ///theme.jokes.neon; 21st October 2026 to 17th April 2027).

4.2 Other links

A few links not from the WhatsApp feed:

- Sir Henry Thompson (1820–1904): funder of the 26-in refractor and 30-in reflector both now at Herstmonceux, he was a celebrity in his day, being a top urological surgeon, author, artist, poultry farmer, porcelain collector, early-adopter motorist, and general all-round Victorian super-dude. See this portrait of him by Sir John Everett Millais of the Pre-Raphaelite Brotherhood (click on the image to enlarge it; click on "Artwork information" and then "Collection text" for details). A keen socialite, Sir Henry held "octave dinners", in which eight diners met at 8pm and ate an eight-course meal (it is plausible to assume that he did not need to do all the preparation and washing-up on his own).
- Deep*Sky Corner: online atlas of deep-sky objects, constellations, and asterisms, with scientific descriptions, historical background, images, and locations in the sky; created by a Swiss amateur astronomy group.
- "Band of Brothers": PDF article by Dr Louise Devoy (Senior Curator at the Royal Observatory Greenwich), downloadable from the Royal Astronomical Society website, on "The entwined histories of the Royal Observatory Greenwich and the Royal Astronomical Society".
- Current angular sizes of planets: a page on the Sky Marvels website, which shows the relative angular sizes of the planets (and of Pluto) and the phases of Mercury and Venus, as currently seen from Earth.
- The website astronomytrek.com: a well-organized general resource on astronomy, space, and stargazing.

5 Monthly person: Johannes Kepler (1571–1630)

Johannes Kepler is best known for Kepler's Laws, deduced by painstaking analysis of the very accurate pre-telescopic observations of Tycho Brahe (these links are from Professor Chris Impey's textbook Teach Astronomy), which can be stated as follows (where the semi-major axis a of an ellipse is half the length of the longer of its two axes of reflective symmetry):

(1) Each planet's orbit is an ellipse, with the Sun at one focus of the ellipse.

(2) The radius vector from the Sun to a planet sweeps out equal areas in equal times (implying that a planet moves faster the closer it is to the Sun, in a specific mathematical way).

(3) The square of a planet's orbital period P is proportional to the cube of its orbit's semi-major axis a (i.e. $P^2 = k.a^3$ for some constant k, whose value relates to the Sun's mass and the units used for P and a).

See these animations from the University of Colorado at Boulder, which explain the three laws and their terminology (tick various boxes to add features to the animations, e.g.velocity and force vectors).

To a good approximation, planets — and also comets and asteroids in bound solar orbits — obey these laws; however, other factors are also relevant, for example gravitational interactions between planets, asymmetric outgassing from comets, light-pressure forces on minor bodies, and to explain the precession of Mercury's orbit, Einstein's General Theory of Relativity.

Isaac Newton later showed that, in an idealized two-body problem of a planet in a bound orbit around a star, Kepler Laws are implied by Newton's more fundamental Laws of Motion and Inverse-Square Law of Gravity. Nonetheless, Kepler's derivation of his Laws from Tycho's observations of planetary positions was a major intellectual feat, as mathematician Terence Tao explains in part of this YouTube video on the "Cosmic Distance Ladder" (the part on Kepler begins at 18:28 in the video, but the rest is interesting too).

The Kepler Space Telescope, whose mission was to find exoplanets around other stars using the transit method, bears Kepler's name with good reason, because Kepler's Laws apply to exoplanets too. For example, by estimating the mass of a system's star, and measuring the period P of one of its planets, you can apply Kepler's third law to derive a, the semi-major axis of that planet's orbit; and from an estimate of the star's intrinsic energy output, you can then judge if that planet is in its star's habitable zone, or not.

For more on Kepler's life and work, see this biography and listen to Chapter 5 from the free online LibriVox audio recording of the book Great Astronomers by Robert Stawell Ball (1840–1913).

6 The night sky in November 2026

Thanks to Paul Whitmarsh for the guide, and to Sarah Carson for the chart.

6.1 Lookahead guide

The chart in section 6.2 shows how the night sky will appear at 9pm at the start of November, 8pm in mid-month, and 7pm at the end of the month. The position and phase of the Moon are shown for the 16th, 22nd, and 26th.

Saturn continues to shine in the evening sky, with Neptune nearby and visible through binoculars or a small telescope. Uranus sits close to the Pleiades this month; under dark skies it appears to the naked eye as a tiny blue-green dot, but binoculars make it much easier to spot. Mars and Jupiter rise shortly before midnight, while brilliant Venus is unmistakable in the morning sky.

High overhead is Cassiopeia, the Seated Queen, whose distinctive W-shape makes it one of the easiest constellations to recognise. In autumn and early winter Cassiopeia stands high while the Plough (Ursa Major) lies low on the northern horizon. Cassiopeia is situated within the fainter winter section of the Milky Way, the Galaxy we live in, which still contains many rewarding star clusters for binocular and small-telescope observers.

With binoculars, start at the second star of the W and look about two Moon-widths up and left to find the sparkling open cluster M103. Then sweep three-quarters of the way from that same star toward the top of Perseus to discover the Double Cluster, two rich clusters side by side, glittering with young blue-white stars (see the image in section 7.1). These lie around 7,500 light years away in a neighbouring spiral arm of the Milky Way.

On the opposite side of Cassiopeia from the last star in the W, move about five Moon-widths away and you'll find Caroline's Rose, a star cluster discovered by Caroline Herschel, sister of William Herschel. This cluster contains over 1,000 stars; in binoculars it appears as a bright haze, while a small telescope reveals a delicate pattern like salt scattered across the sky.

The Pleiades star cluster, also known as the Seven Sisters, rises in the east and is easily visible to the naked eye. How many stars can you see without optical aid? Most people see six, but under exceptional conditions keen-eyed observers can spot 10 or more.

November brings three meteor showers, each with modest rates of activity, but which between them cover much of the month. The Southern Taurids peak around the night of 4th/5th November, followed by the Northern Taurids around 11th/12th November. Both produce slow, bright meteors. The Leonids peak on 18th November; with the Moon just past First Quarter, the best viewing will be after 1am when the Moon has set.

6.2 Star chart

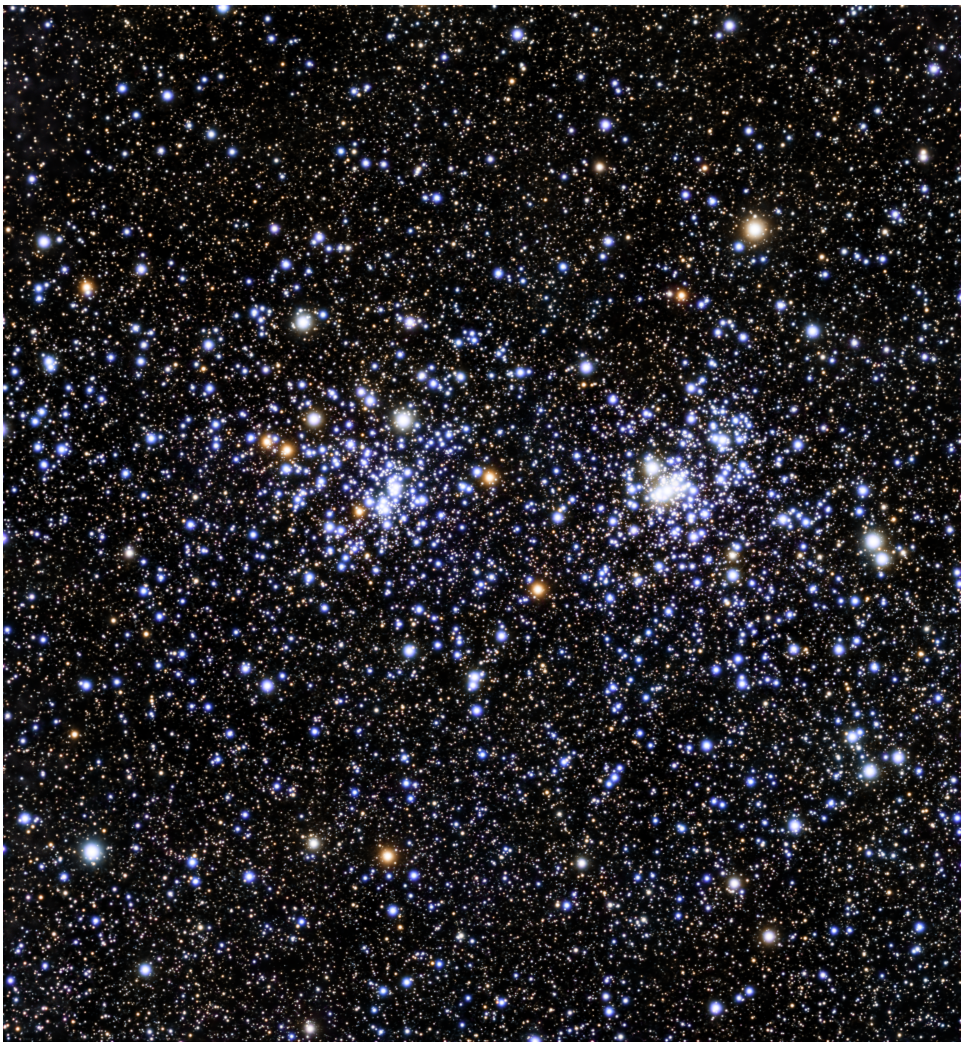
Refer back to the lookahead guide in section 6.1 as required.



7 LAS image gallery

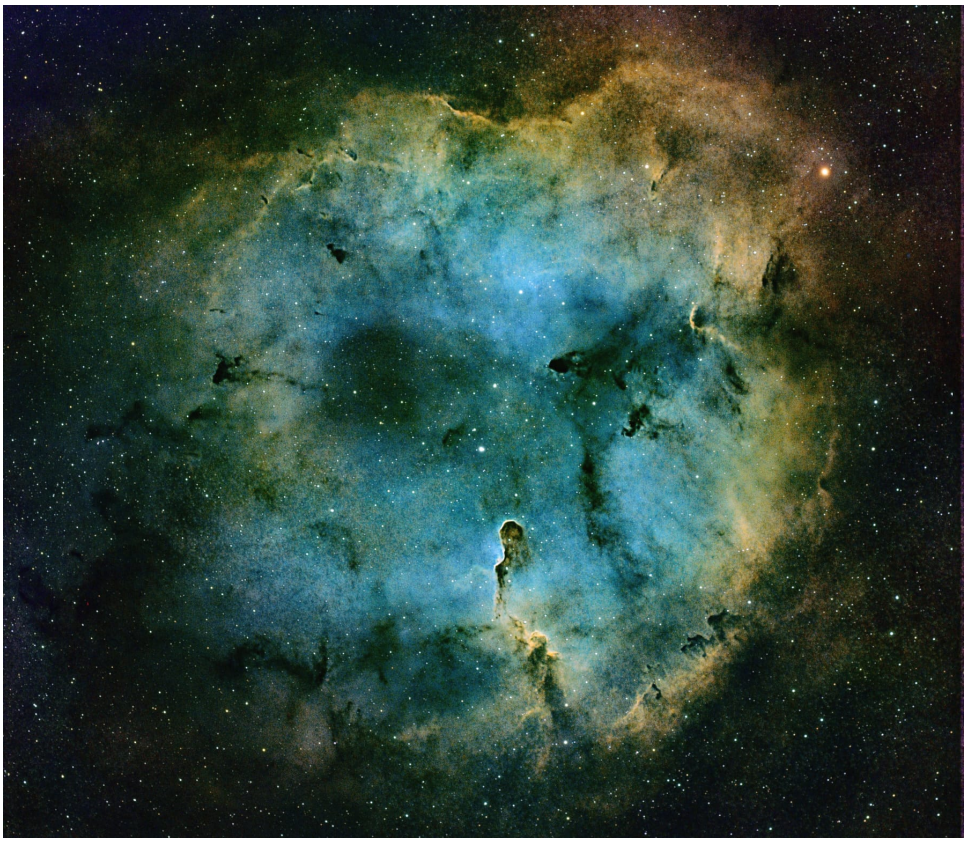
Regarding section 7.2, see these links: Elephant's Trunk Nebula and the constellation Cepheus (both from the website The Planets, which although focussed on the objects in our Solar System, also contains information on other celestial objects).

7.1 Perseus Double Cluster (Paul Whitmarsh)



See this article on the Double Cluster from the BBC Sky at Night Magazine, this guide to the constellation Perseus, and the mention of the Double Cluster in section 6.1.

7.2 Elephant's Trunk Nebula (Peter Quinn)



7.3 North America Nebula, NGC 7000 (Robert Massey)



See this BBC Sky at Night guide to NGC 7000 and this NASA webpage.

7.4 Mercury just after sunset, Seaford seafront (Chris Taylor)



Zoom in near the centre; Mercury is just above the horizon.

7.5 Camping under the Milky Way (Dan Taylor)

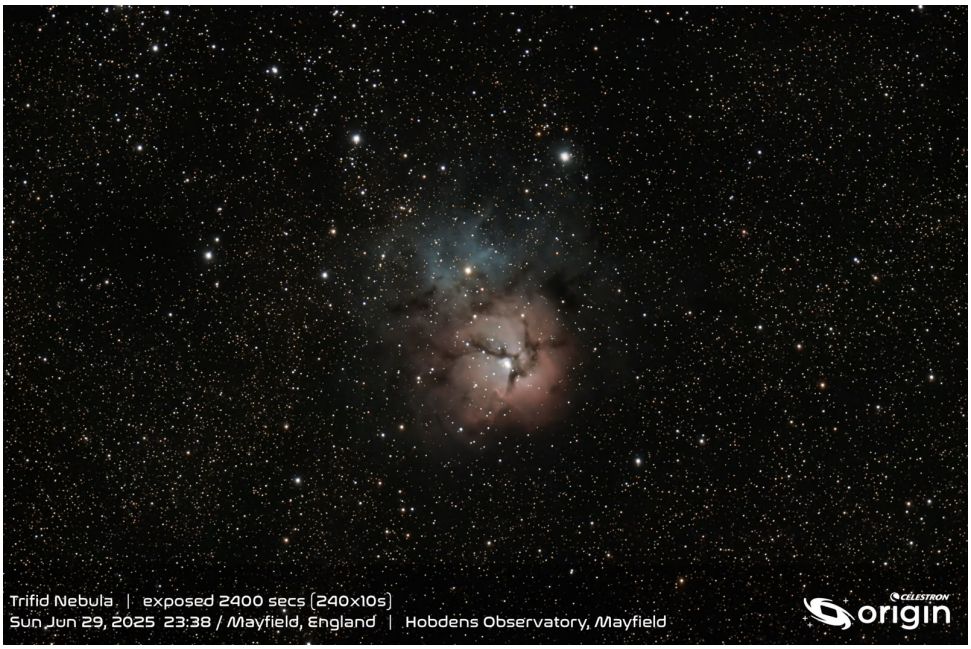


7.6 Detailed lunar landscape (Paul Whitmarsh)



Top-left corner points roughly to lunar North. The central dark area is Mare Fecunditatis, with part of Mare Tranquillitatis to its left, and the bright crater Langrenus on its right edge. See this lunar map (with lunar North at the top).

7.7 Trifid Nebula, M20 (Gerard Fox)



See this NASA webpage on M20, in the constellation Sagittarius, known for its teapot asterism (video from the YouTube channel Learn the Sky).

8 Total solar eclipse from Greenland, 12th August 2026

8.1 Geographical context

Nick Quinn saw this eclipse from Rypefjord, part of Greenland's east-coast fjord system Scoresby Sund, surveyed by William Scoresby (1789–1857) in 1822. See this satellite image of Rypeford and this one of Scoresby Sund.



Wide-angle view of totality (zoom in to see it) from Rypefjord's eastern shore.

8.2 Nick Quinn's personal account

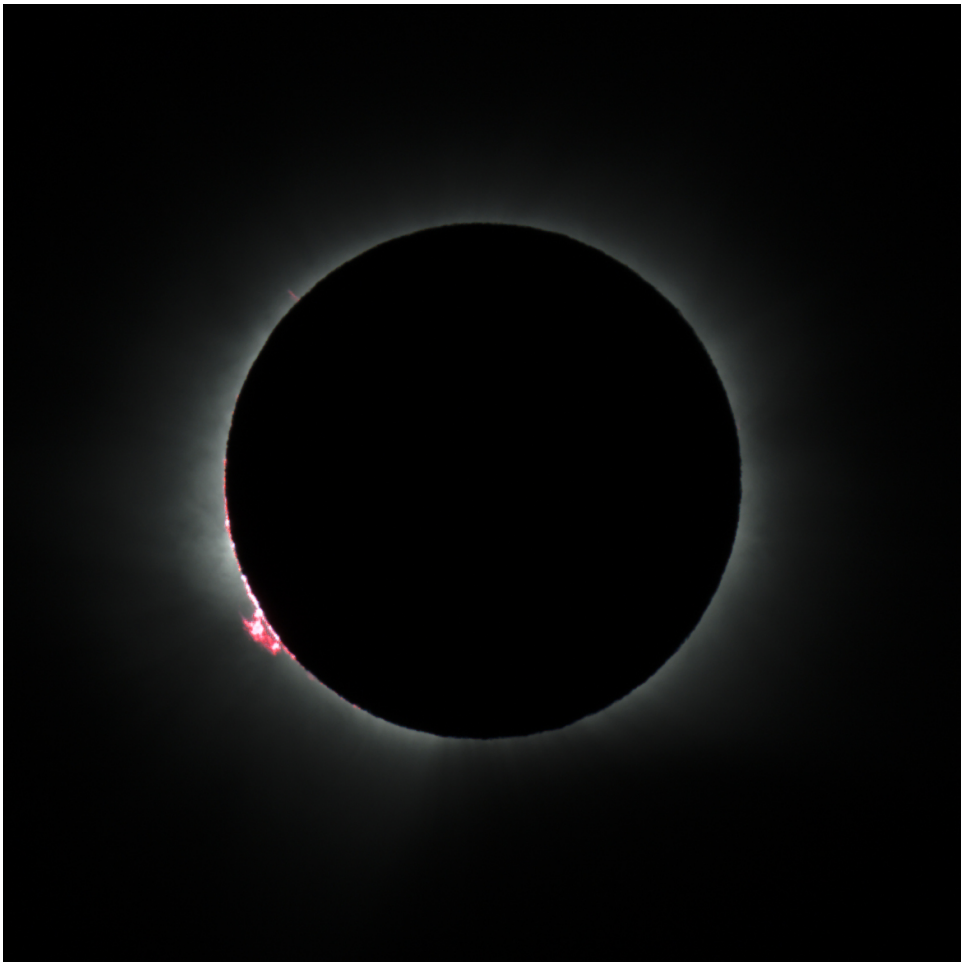
I travelled to Greenland aboard Swan Hellenic's ship Diana (chartered by Astro Trails) to observe the 12th August 2026 total solar eclipse. On eclipse day the ship took station in Rypefjord deep within Scoresby Sund. The fjord is magnificent being about 25km long, 5km wide with a glacier coming down to the water at the northern end. Small icebergs calved from the glacier gleam in the sunlight as they slowly melt in the water. The weather was

promising with sunshine, little cloud and moderate winds. Fourteen of the 185 passengers wanted to be on land for the eclipse so we were ferried to shore by Zodiac RIBs — the standard mode of transport for exploring the Arctic coast. From our vantage point on the eastern shore of the fjord (71.0706 deg north, 27.7122 deg west)) we looked west across the water towards the late afternoon Sun, the SH Diana just over a kilometre away. Several members of the ship's crew stood guard on the lookout for polar bears (not seen) and keeping an eye on some musk oxen on the low hills behind us.

The eclipse proceeded as usual with the Moon's disk gradually encroaching on the Sun; small amounts of cloud were beginning to build up. A few minutes before totality shadow bands were clearly seen rippling across the tundra. The photosphere broke up into Baily's Beads as the light rapidly diminished. Totality revealed a magnificent prominence and a beautiful, detailed corona with the Sun flanked by Venus and Jupiter.



Baily's Beads.



Prominence during totality.

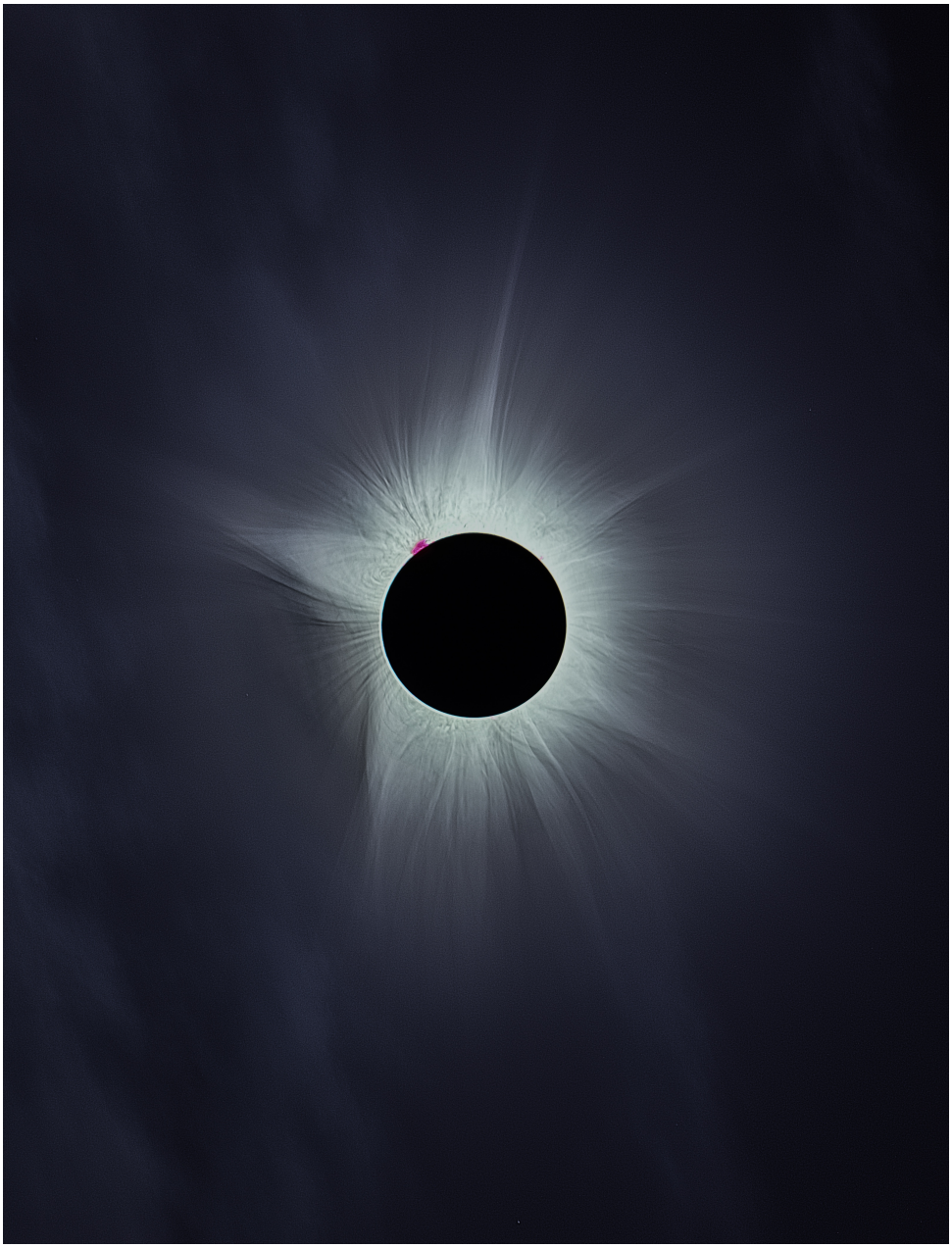
Two minutes and 16 seconds later the diamond ring shone forth marking 3rd contact. It became obvious that the cloud was beginning to build-up quite seriously and not long after 3rd contact the Sun was pretty much obscured for the rest of the day — we had been very lucky!

The SH Diana was the only ship in Rypefjord although there were several more further south in the main channel of Scoresby Sund. I believe few people were actually ON Greenland (rather than onboard a ship) during the eclipse, so count myself and the few others in the 'landing party' as having had a unique view of this fantastic celestial event!

Nick Quinn

Photographs: wide-angle DJI Osmo 6, all others lens RedCat 51, camera ZWO ASI2600MC Pro, controlled by Raspberry Pi 5.

See the next page for Nick's image of the corona during totality.



Solar corona during totality. N.B. This image has been rotated by a quarter-turn clockwise, to fit the page's aspect ratio better and make the details a bit larger on the page. The reddish prominence at top left here was at bottom left in the previous image.