



*GET SET FOR A GREAT SEASON WITH MARS*

#209 OCTOBER 2022

# Sky at Night

THE UK'S BEST SELLING ASTRONOMY MAGAZINE

## ARTEMIS READY FOR THE MOON

Meet the people behind  
NASA's return to the Moon

**YOUR GUIDE TO THIS  
MONTH'S SOLAR ECLIPSE**

**AUTUMN'S TOP  
TARGETS FOR  
CITY STARGAZERS**

*FÉLICETTE, THE CAT  
THAT FLEW TO SPACE*

*ANCIENT LUNAR HISTORY  
WRITTEN IN SANDSTONE*

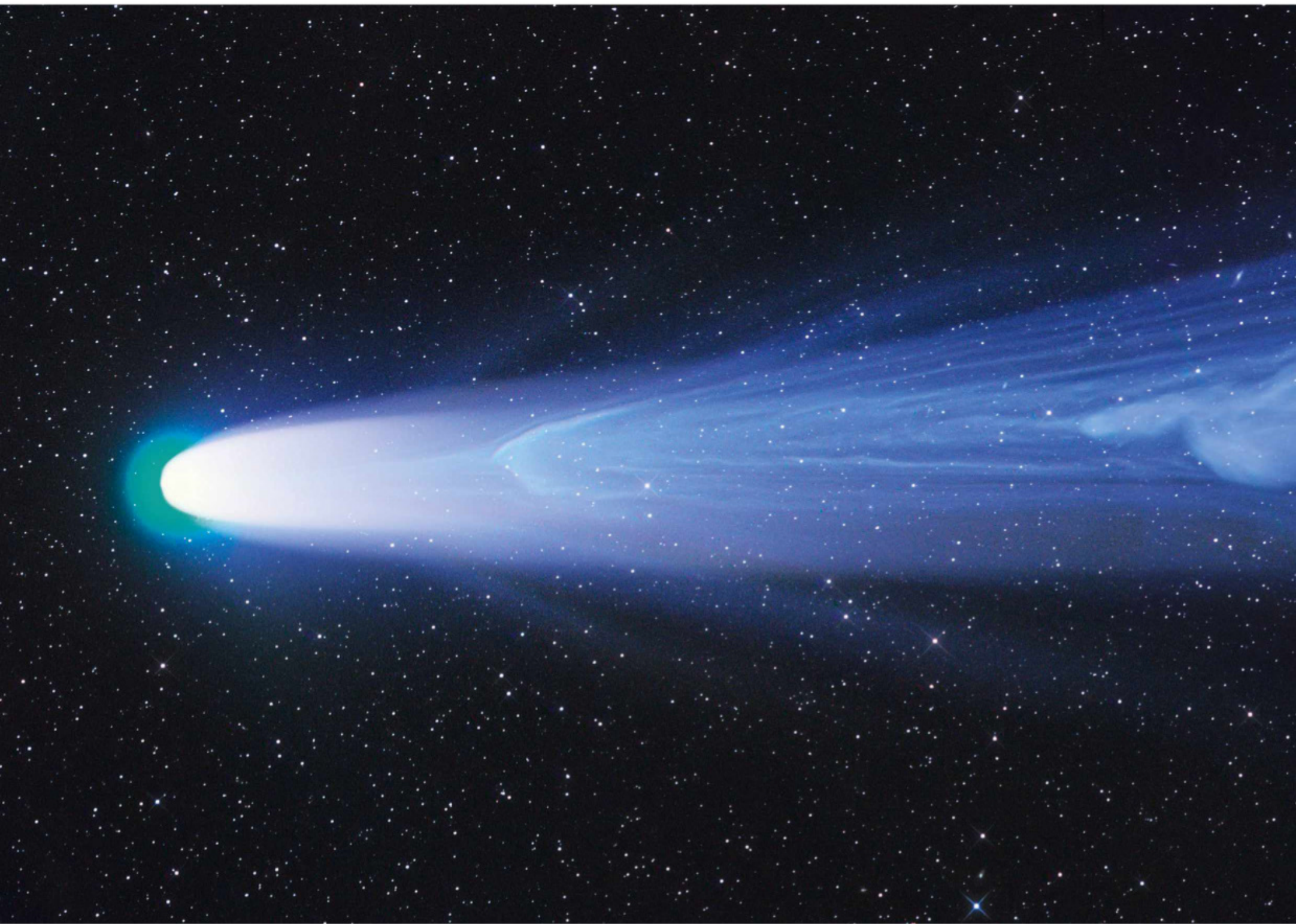
*NEW ASTRO IMAGING KIT  
RATED AND REVIEWED*





# Astronomy ✨ Photographer of the Year

*BBC Sky at Night Magazine* is proud to reveal the 2022 winners of the world's biggest astrophotography contest



## △ **OVERALL WINNER / Planets, Comets & Asteroids**

### **Disconnection Event**

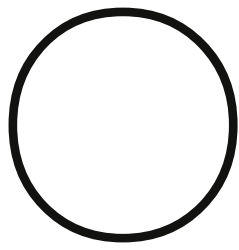
**Gerald Rhemann**

**Location:** Khomas, Namibia, 25 December 2021

**Equipment:** ASA 12-inch astrograph, ASA DDM85 mount, ZWO ASI6200MM Pro camera, 1076mm f/3.6, mosaic of two LRGB composite panels, 400-second exposure per panel

**Judge's verdict:** "Astronomy, myth and art come together beautifully in this shot. It holds great value to scientists, as it elegantly captures a disconnection event. Yet this photograph, which was taken on Christmas Day, seems to tell an otherworldly story too – it could be the Star of Bethlehem, an angel or a fairy soaring through the night sky." – **Imad Ahmed** ►





nce again, astrophotographers from across the globe have submitted their best work in a bid to win the prestigious title of Astronomy Photographer of the Year 2022. The panel of judges had their work cut out, picking from 3,204 incredible images submitted by 649 entrants from

six continents. After lengthy and detailed deliberations, they have selected the best of the best, and we have the pleasure of presenting the winners of the 14th contest here, across all eight main categories. You can also see winners of the competition's special prizes for astrophotography newcomers and for imagers who have processed professionally taken data, as well as the special prize for entrants

younger than 16. You can see the winning photos for yourself at the National Maritime Museum in Greenwich, London from 17 September. Visit [www.rmg.co.uk/astrophoto](http://www.rmg.co.uk/astrophoto) for details.

## MORE ONLINE

A gallery of these and more stunning images from the 2022 competition



## FREE 2023 CALENDAR

If you want to see these stunning images throughout next year, pick up the December issue of *BBC Sky at Night Magazine* for our free 2023 calendar. As well as listing all the unmissable astronomical events throughout the year, each month features one of the winners from Astronomy Photography of the Year 2022. It'll be on sale from 17 November 2022.









## ◁ Aurorae

### **In the Embrace of the Green Lady**

Filip Hrebenda

**Location:** Hvalnes, Iceland, 10 April 2021

**Equipment:** Sony ILCE-7RM3A camera, 16mm lens, f/2.8 aperture, ISO 2500 Sky: 5-second exposure, foreground: 20-second exposure

**Judge's verdict:** "I love this – it sums up aurorae for me: the green 'swoosh' reflected in the icy lake, the clarity of the edges of the ice blocks and the looming shadow of the mountain." – **Sheila Kanani**

## Galaxies ▷

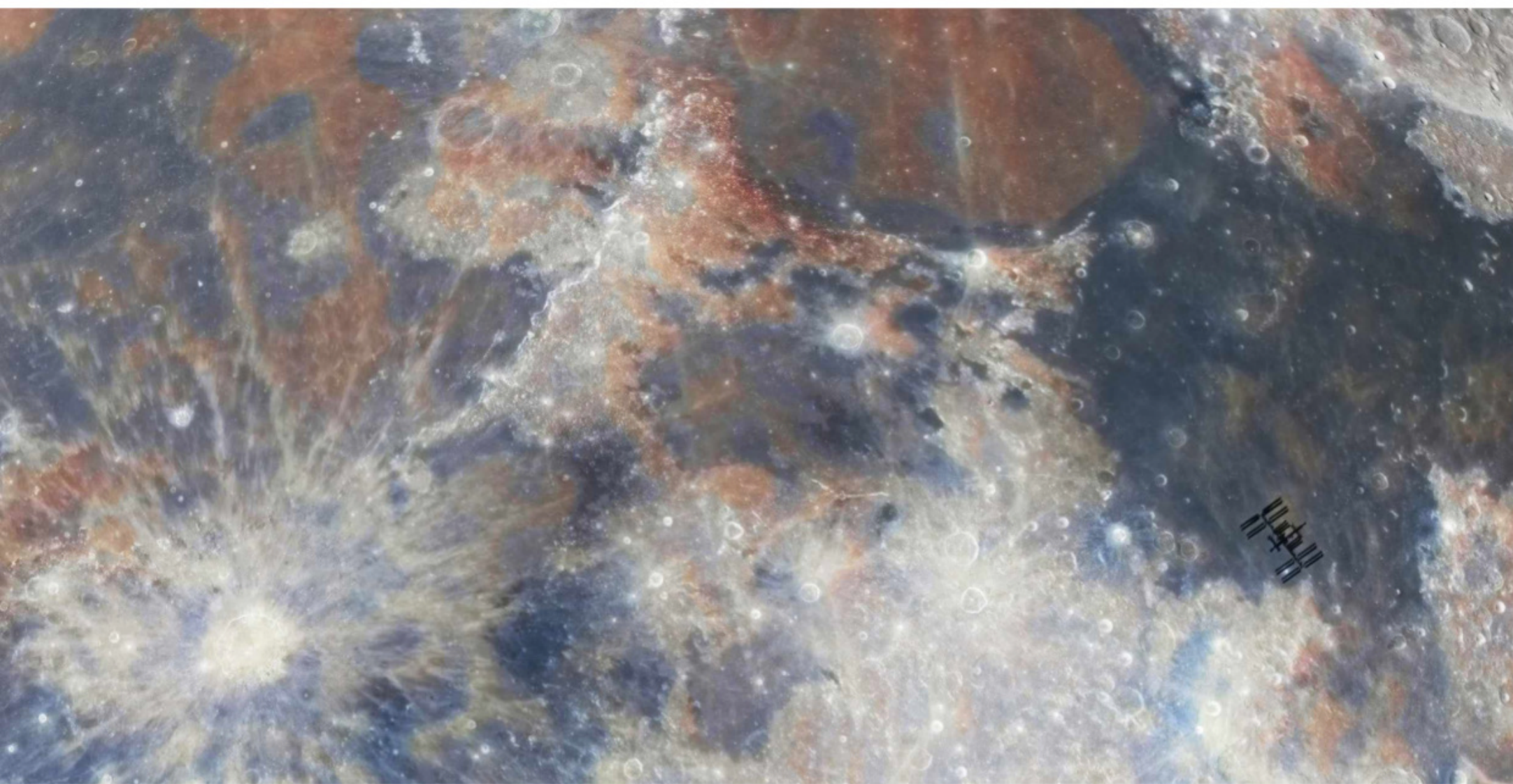
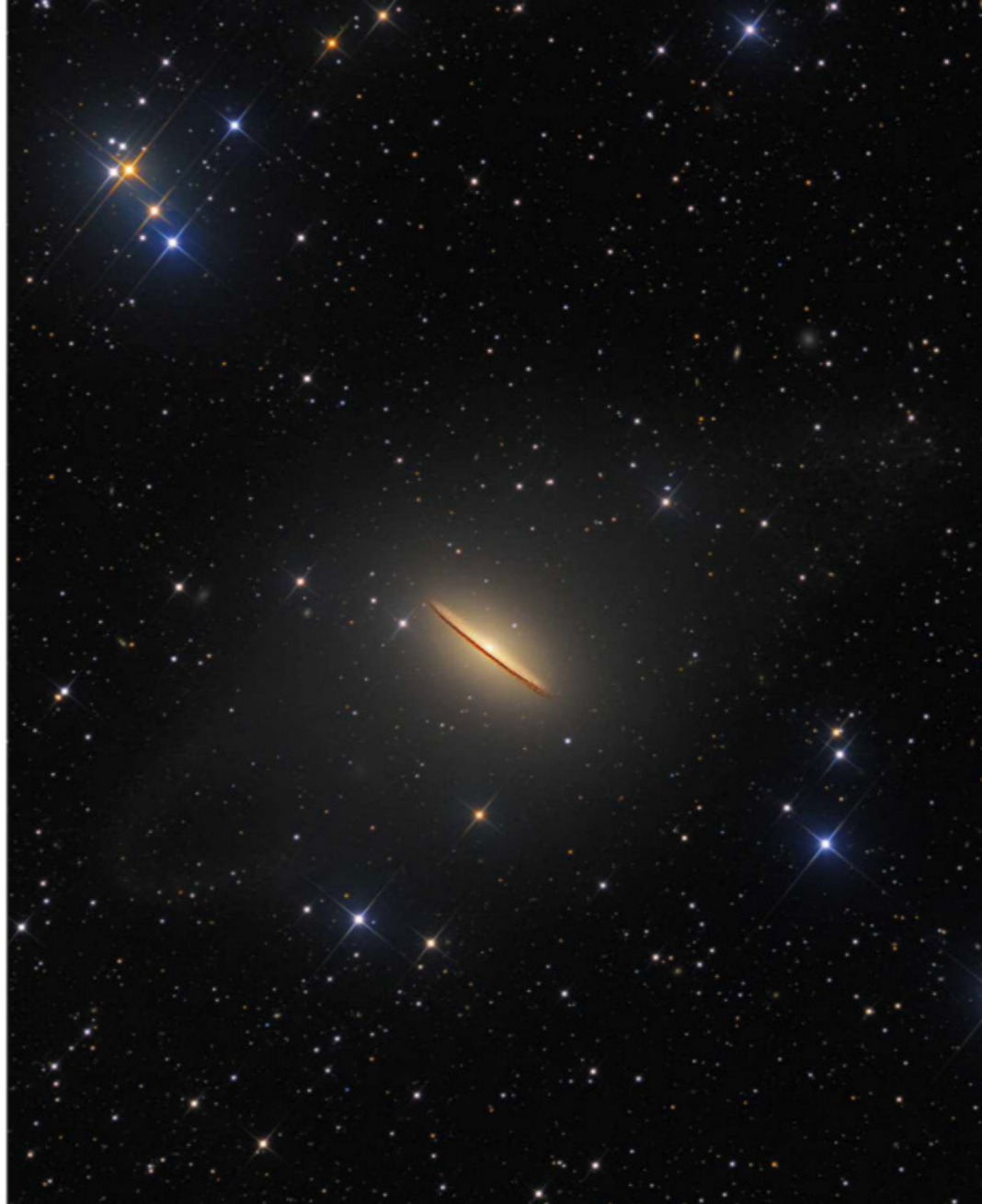
### **Majestic Sombrero Galaxy**

Utkarsh Mishra, Michael Petrasko, Muir Evenden

**Location:** New Mexico, USA, 5 May 2021

**Equipment:** ATEO 16-inch f/3.7 Dreamscope Newtonian astrograph, Paramount ME II mount, Baader LRGB filter, FLI Proline 16803 CCD camera, 1,558mm f/3.7, 56x 300 seconds

**Judge's verdict:** "The Sombrero is a well-documented galaxy, yet astrophotographers still find ways to tease more majesty from it. To see the misty remnants of previous collisions surrounding the galaxy, itself floating alone in the void, is just exquisite." – **Steve Marsh**



## △ People and Space

### **The International Space Station transiting Tranquility Base**

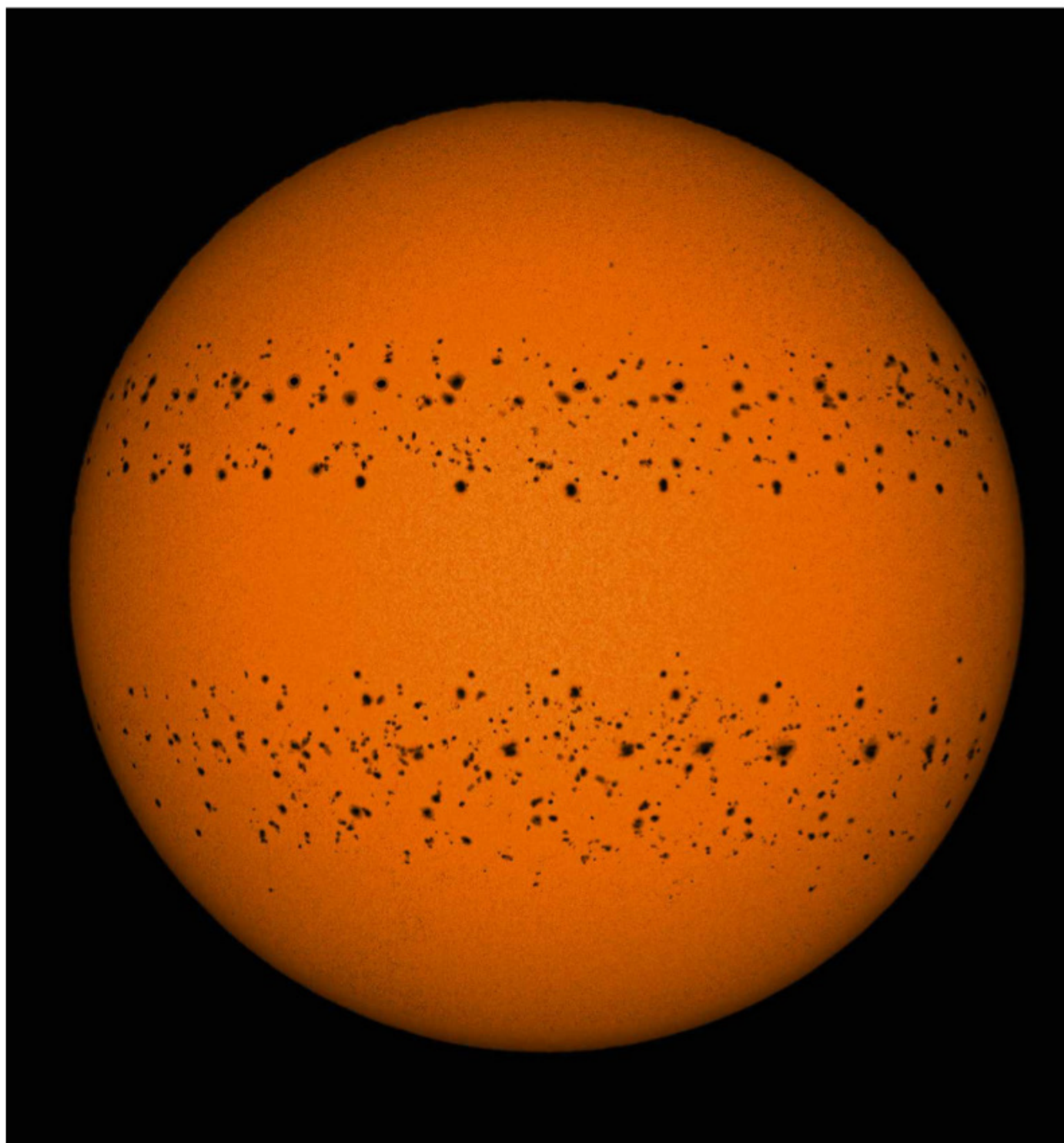
Andrew McCarthy

**Location:** Arizona, USA, 19 January 2022

**Equipment:** Celestron C11 and Explore Scientific AR127 telescopes, iOptron CEM70 mount, UV/IR Cut filter, ZWO ASI174MM and Sony A7 II cameras, 2,800mm f/10, 0.3-millisecond exposure

**Judge's verdict:** "The symbol of man, the tiny silhouette of the ISS, is dwarfed by the vast and detailed lunar surface, coloured by mineral deposits. It shows us just how fragile we are." – **László Francsics** ►





## ◀ Our Sun

### A Year in the Sun

**Soumyadeep Mukherjee**

**Location:** West Bengal, India,  
31 December 2021

**Equipment:** Nikon D5600  
camera, Sigma 150–600c  
lens, Thousand Oaks filter  
(White-Light), 600mm lens,  
f/6.3 aperture, ISO 100,  
365 individual exposures  
(1/80-second to 1/500-second)

**Judge's verdict:** “The commitment and diligence (not to mention luck) needed to image the Sun every day for a year is a feat within itself. But, more than just a matter of hard work, this photographer has achieved a fascinating and unique look at the progression of sunspot bands across its disc.” – **Steve Marsh**





## ◁ The Sir Patrick Moore Prize for Best Newcomer

*This special prize is awarded to an astrophotographer who started the hobby in the last two years*

### **The Milky Way Bridge Across Big Snowy Mountains**

**Lun Deng**

**Location:** Sichuan, China, 21 February 2021

**Equipment:** Nikon D810 camera, 35mm lens, f/1.6 aperture, ISO 2000, multiple 30-second exposures

**Judge's verdict:** "The icy, ragged mountaintop is contrasted beautifully with the Milky Way, the lighter pink and indigo hues of which offer us a mesmerising, warm glow. I also have to commend the photographer's dedication – standing in the snow in freezing conditions – to capture this picture!" – **Imad Ahmed**

## ▽ Skyscapes

### **Stabbing into the Stars**

**Zihui Hu**

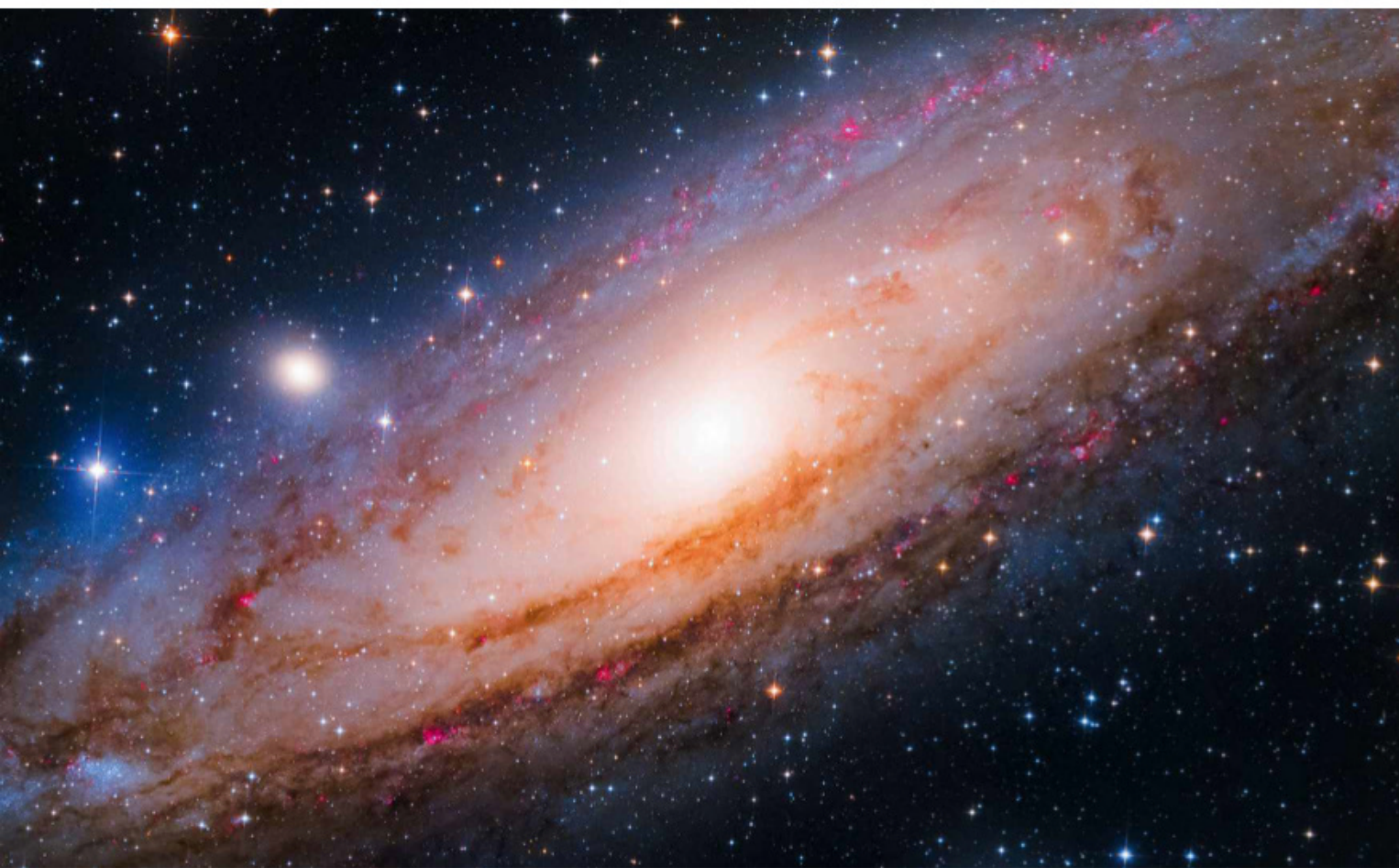
**Location:** Tibet, China, 24 December 2021

**Equipment:** Sony ILCE-7R3 camera, Tamron 150–500mm lens at 150mm, f/5.6 aperture, 75x 30-second exposures

**Judge's verdict:** "I love the juxtaposition of the star trails against the clear peak of the mountain. The motion of the clouds adds to the drama." – **Sheila Kanani** ►







### △ Stars and Nebulae

#### **The Eye of God**

**Weitang Liang**

**Location:** Coquimbo region, Chile, 8 August 2021

**Equipment:** ASA N20 Newtonian telescope, ASA DDM85 mount, FLI Proline 16803 camera, 500mm f/3.8, 22.5 hours total exposure

**Judge's verdict:** "The colours in this photograph make for a stunning composition – from the fiery red to the defiant, moody blue at the centre of the 'eye'. It's easy to see how the ancients used to stargaze into the heavens and imagine that the cosmos was looking back, keeping a watchful eye over us." – **Imad Ahmed**

### △ Young Astronomy Photographer of the Year

#### **Andromeda Galaxy, The Neighbour**

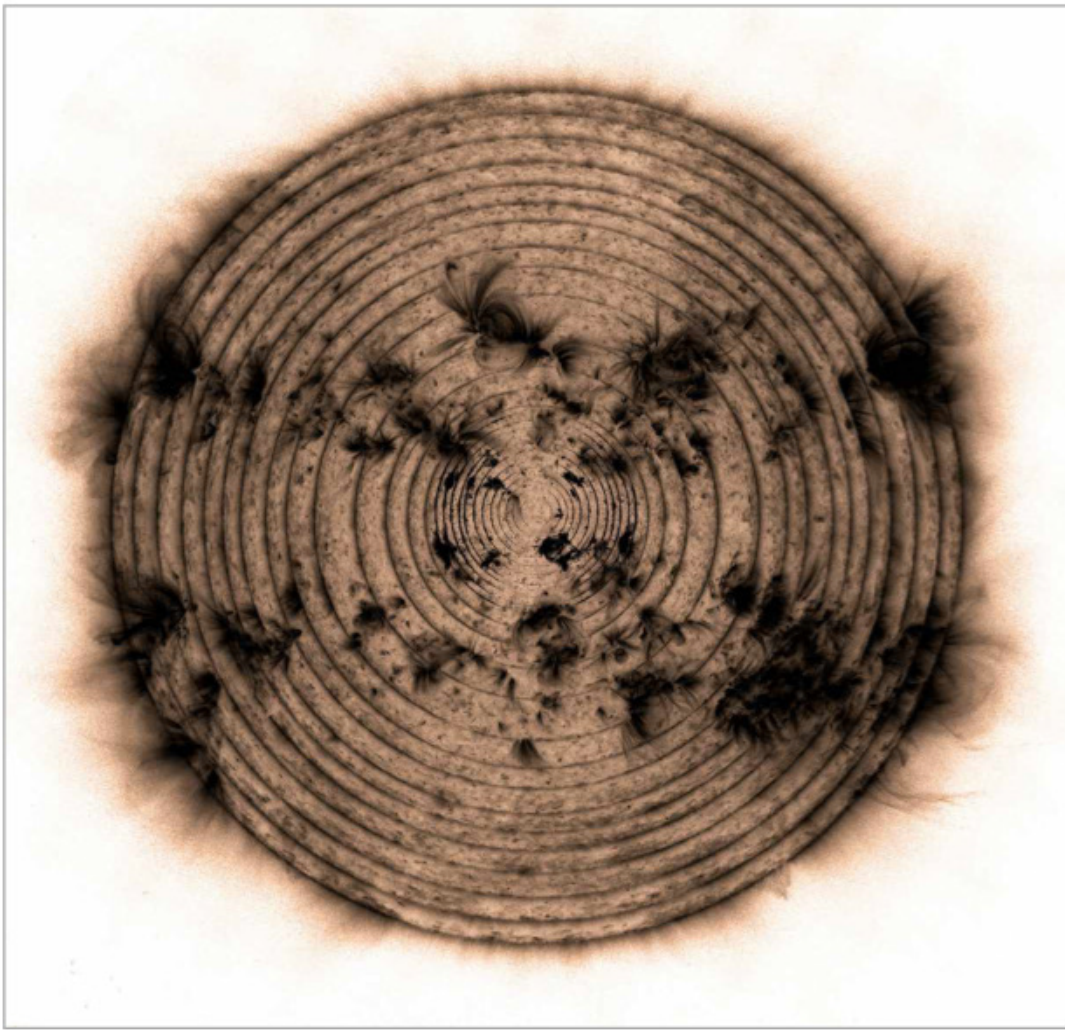
**Yang Hanwen and Zhou Zezhen, aged 14**

**Location:** Yunnan Province, China, 7 October 2021

**Equipment:** Sky-Watcher 150/750P Newtonian telescope, iOptron CEM70 mount, Antlia LRGB, HYO H-alpha filter, ZWO ASI294MM Pro camera, 750mm f/5, 17 hours total exposure

**Judge's verdict:** "From the dark dust lanes to the HII regions, these young photographers have expertly brought out the galaxy's stunning details to produce a vibrant image. One of my favourite pictures from the competition!" – **Melissa Brobbly**





## ◁ The Annie Maunder Prize for Digital Innovation

*Entrants were invited to put a unique spin on data taken by professional observatories*

### Solar Tree

**Pauline Woolley**

**Location:** UK

**Data source:** Solar Dynamics Observatory

**Equipment:** Original images from the AIA 0131 Angstrom channel of the Solar Dynamics Observatory (SDO), 1 January 2020 to 1 February 2022

**Judge's verdict:** "Dendrochronology – the scientific method of calculating dates based on tree rings – is used by art historians and conservators to date wood panel paintings, but here the technology has been utilised to create an unusual and beautiful composition. This is an innovative photograph that immediately astonished all the judges." – **Hannah Lyons**

## Our Moon ▷

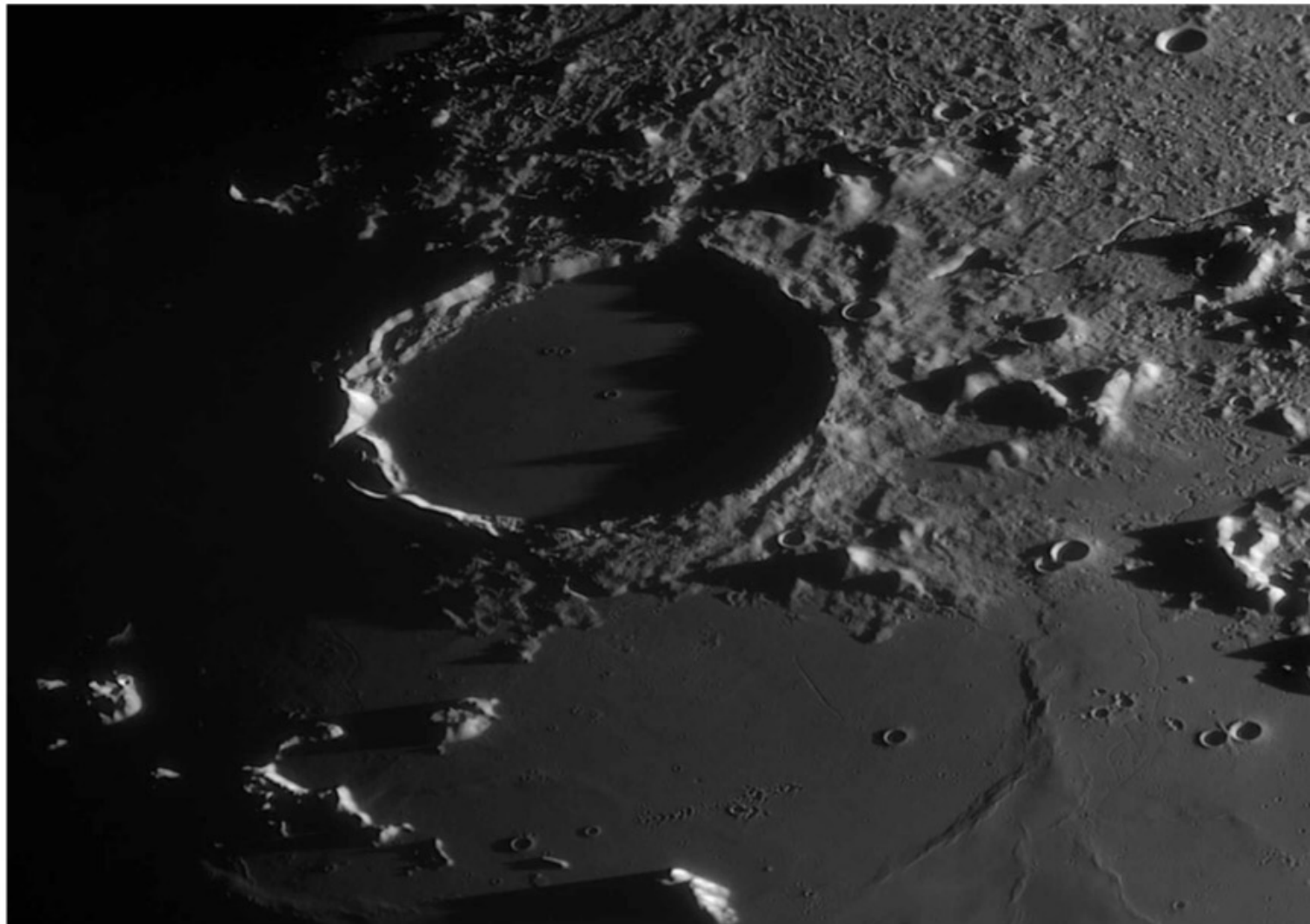
### Shadow Profile of Plato's East Rim

**Martin Lewis**

**Location:** Hertfordshire, UK, 20 April 2021

**Equipment:** Home-built 444mm Dobsonian Newtonian reflector telescope, home-built equatorial tracking platform mount, Astronomik 642nm IR filter lens, ZWO ASI174MM camera, 12.8m f/29, multiple 29-millisecond exposures

**Judge's verdict:** "This close-up of the Plato crater has become one of my favourite photographs of the Moon. This image of the east rim being hit by the Sun's rays is wondrously unique and proves that, no matter how often we look at the Moon, it always has many more wonderful sights for us to observe." – **Melissa Brobby** 📸



## THE JUDGES

**Imad Ahmed:** Director of the New Crescent Society, celebrating Islam's rich astronomy heritage.

**Yuri Beletsky:** Professional astronomer and nightscape photographer based in Chile.

**Ed Bloomer:** Public

Astronomy Manager at Royal Museums Greenwich.

**Melissa Brobby:** Science communicator and Social Media Officer for the Institute of Physics.

**László Francsics:** Architect and chair of the Hungarian

Astrophotographers' Association.

**Shelia Kanani:** Planetary scientist and Education, Outreach and Diversity Officer at the Royal Astronomical Society.

**Hannah Lyons:** Assistant

Curator of Art at the Royal Museums Greenwich.

**Steve Marsh:** Art Editor of *BBC Sky at Night Magazine*.

**Alan Sparrow:** Chair of the UK Picture Editors' Guild and Director of the UK Pictures Editors' Guild Awards.