The Night Sky

May – June

Crawley Astronomical Society



SN 2026kid in NGC5907

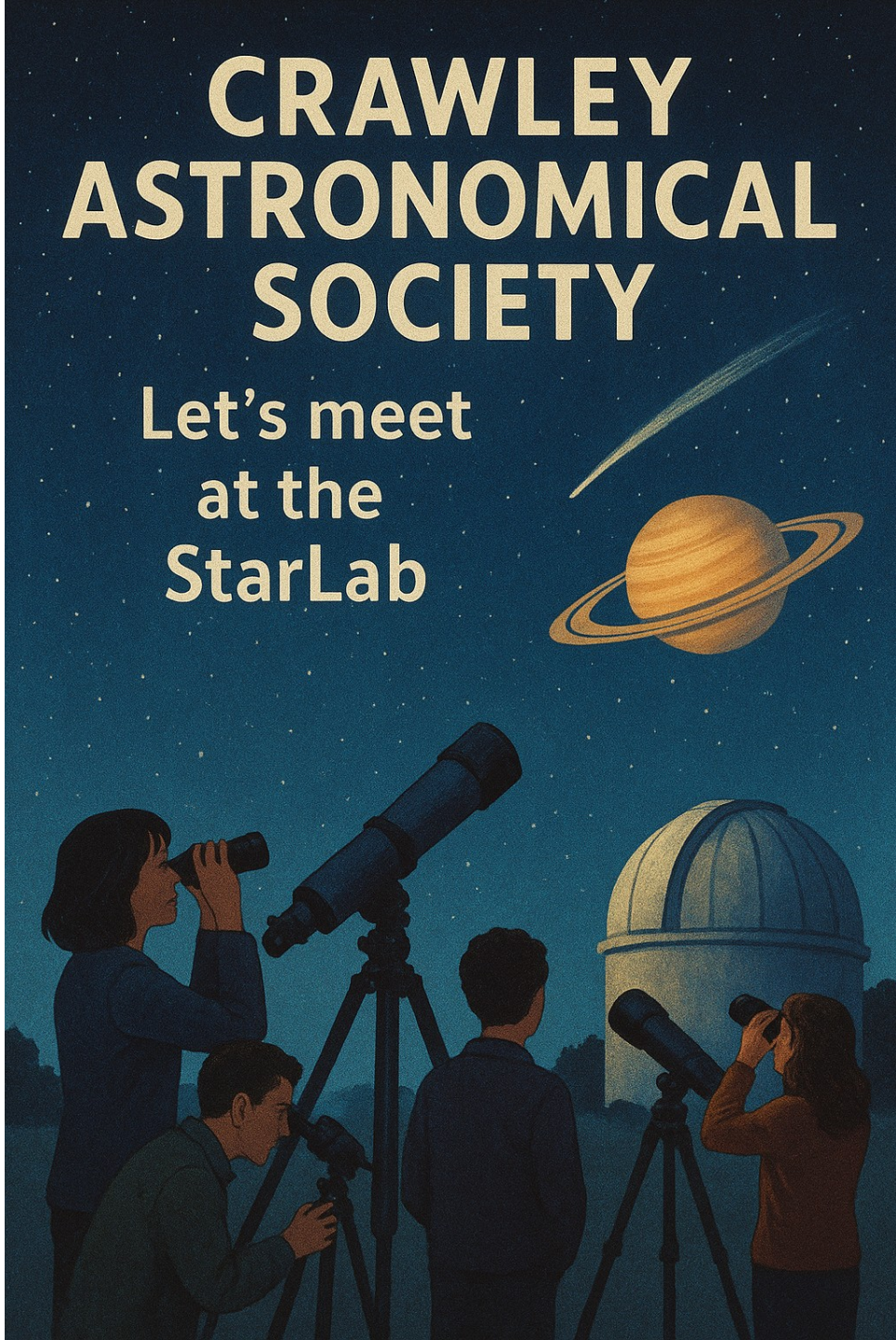


CAS Workshops

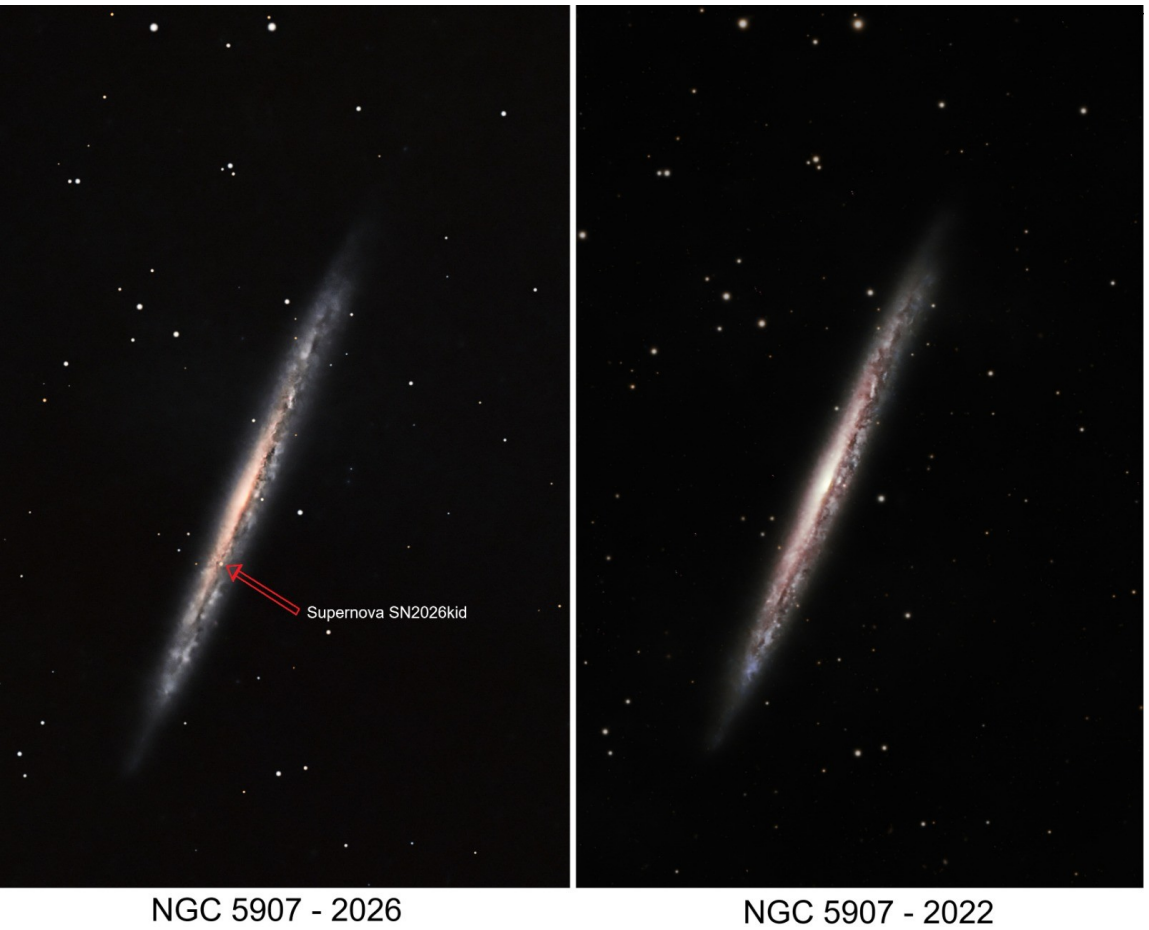
- ✓ 9th January: image processing with Siril
- servicing a mount: -> will be replaced by a Video from Kevin
- ✓ 24th April: using masks in image processing
- 22nd May: Using GIMP to process images
- 12th June: different types of reflectors, pros and cons (SCT, RASA, RC, Mak, Newton)
- 10th July: Focus on Stretching – from the basics to new methodology
- 14th August: NINA acquisition software
- Choosing an astro camera
- Mono cameras

Outreach – 2026 plan

- ✓ 24th January – Science Festival at the Caterham school
- x 27th February – in collaboration with the Caterham school – Cancelled due to the weather
- x 6th March – Observation night at the StarLab – Cancelled due to the weather
- ✓ 16th March – Science Day at the Copthorne Prep School
- x 27th March – Let’s observe the night sky – Outreach at the StarLab – 7.30pm
- ✓ 24th April – Outreach at the StarLab
- 16th May – STEM in the Park – Crawley
- 12th August – Solar Eclipse – Tillgate park TBC



Astro News!



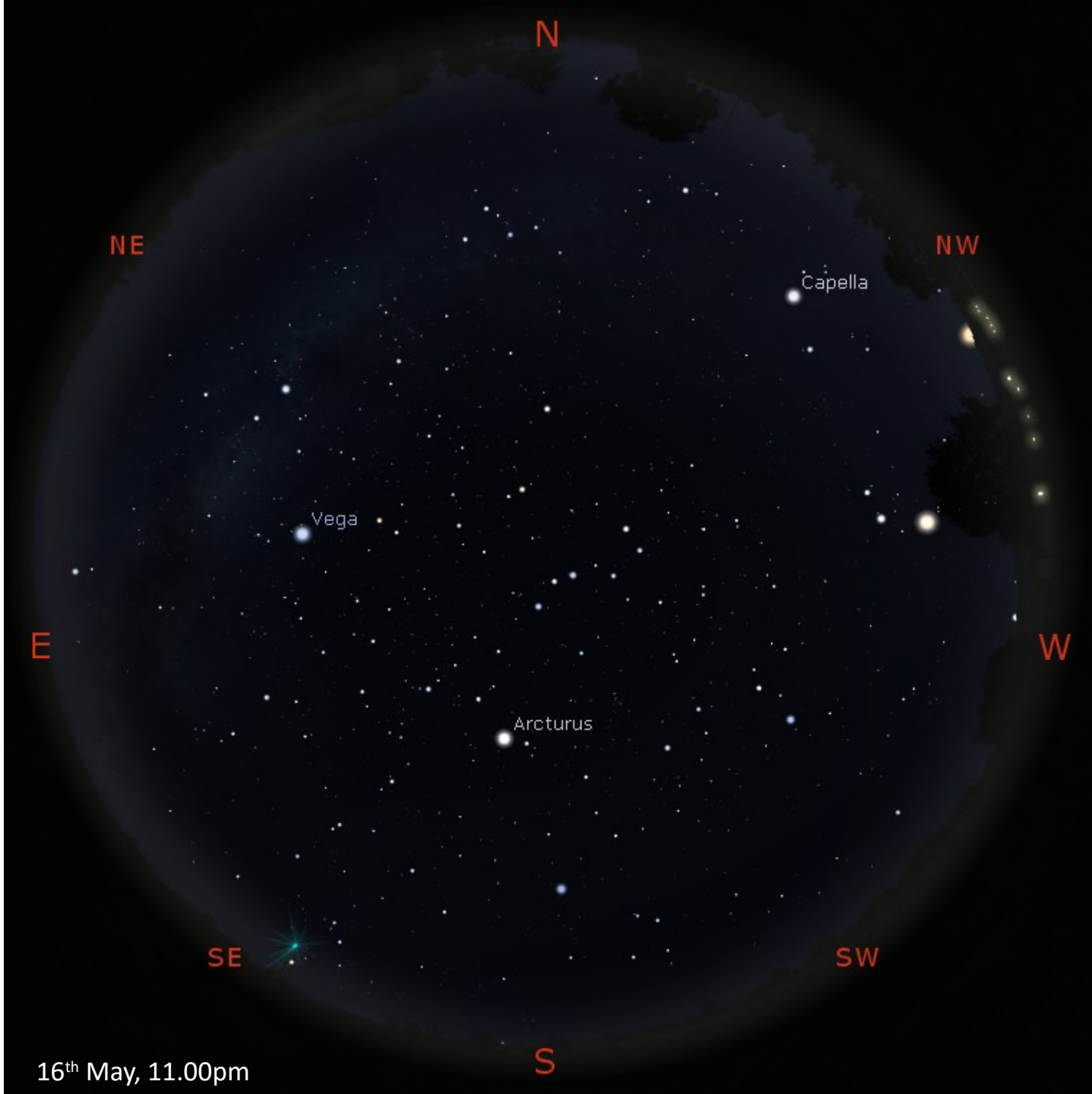
NGC 5907 - 2026

NGC 5907 - 2022

- Supernova in NGC5907 – SN 2026kid
- Discovered on the 22nd April 2026
- Discoverer: Yasuo Sano (Japan)
- Type: II – core-collapse of a massive star
- Magnitude: 15 to 16
- NGC5907 – The Splinter Galaxy, an edge-on spiral galaxy 46-50 million light years away famous for its massive tidal streams

April - May Sky Diary

- Globular Cluster Season! Constellation Bootes shining towards the south
- Full Moon 31st May, known as the Blue Moon
- New Moon is tomorrow! Next one 15th June
- From 24th May to the 17th July, no astronomical night in Crawley
- Around the solstice the Sun only dips to about **–15° to –16°**, never reaching –18°
- A good season to try out some variable star photometry (e.g. W Ursa Major)
- Planets:
  - Jupiter visible in the evening sky, next opposition 13th February 2027
  - Saturn, next opposition 5th October 2026
  - Mars, next opposition 19th Feb 2027
  - 23rd April: Venus – Uranus conjunction in the evening sky
- **12th August: Total solar eclipse, 91% partial in the UK!**



16th May, 11.00pm

Project “Adopt a star!”- Introduction

Collaborative photometry project

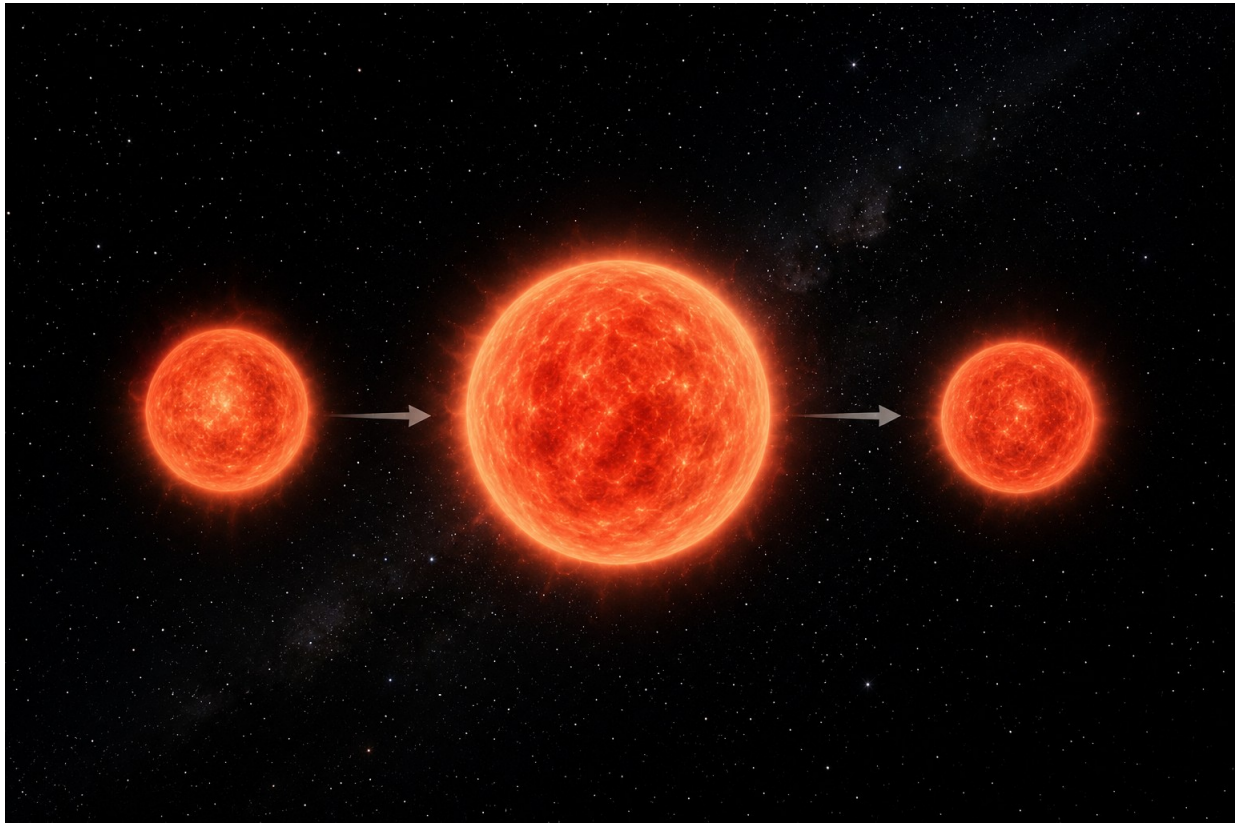
- Members “adopt” one or 2 of four variable stars and regularly measure brightness over several month
- The results will be combines into shared CAS light curves

Why?

- No real dark sky over mid-May to mid-July
- Variable star monitoring works well in twilight conditions
- Learn practical photometry
- Produce real scientific measurements
- Build a society-wide observing dataset

Time commitment

- Just 2-5 minutes per clear night
- Then continue with normal imaging



Project “Adopt a star!” – a simple workflow

Step 1 - Capture images

- Point towards the star
- Take 10 short exposures
- Seestar: save individual raw files
- Subframe duration: around 10 sec

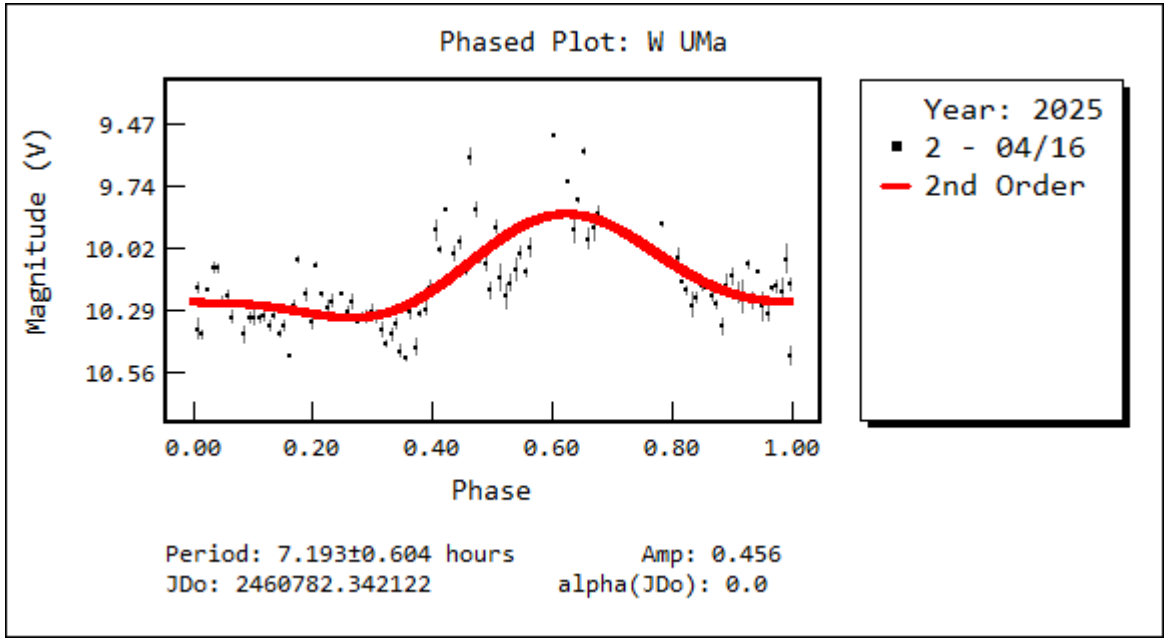
Step 2 – Measure brightness

- Using differential photometry, comparing to well known stars in the field
- It removes any effect from thin clouds, sky brightness, …

Step 3 – Process with Software

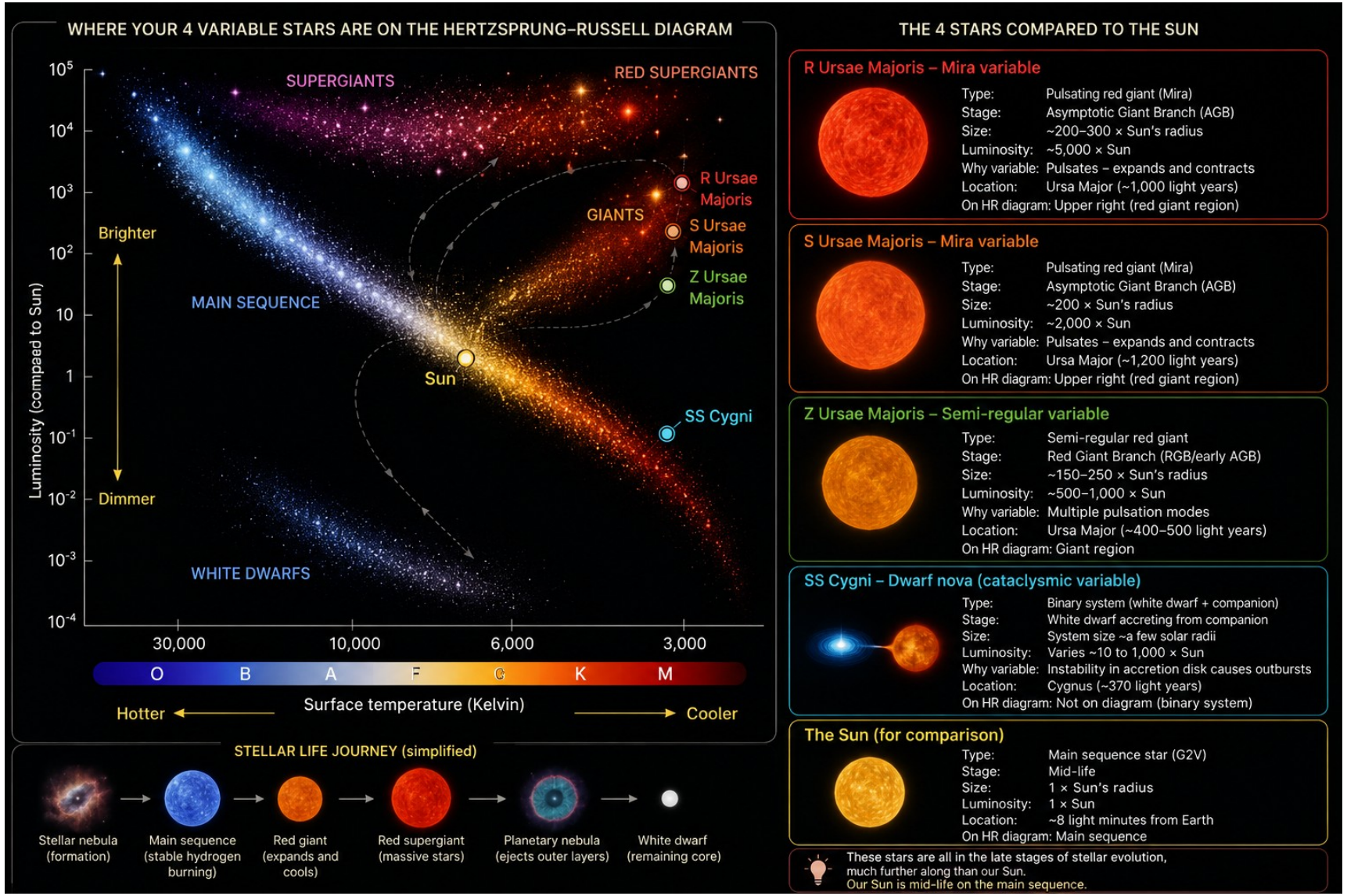
- Tycho Tracker
- ASTAP (calibrate, align and plate-solve) and Muniwin (free software)

Step 4 – Submit your results!



Project “Adopt a star!” – Let’s team

- R Ursa Major: a giant dying red star physically expanding and contracting over months
- S Ursa Major: a giant losing material into space. Its outer atmosphere pulses as it approaches stellar death
- Z Ursa Major: A giant oscillating in multiple pulsation modes
- SS Cygni: a white dwarf stealing gas from a companion star, the gas disk occasionally erupts dramatically



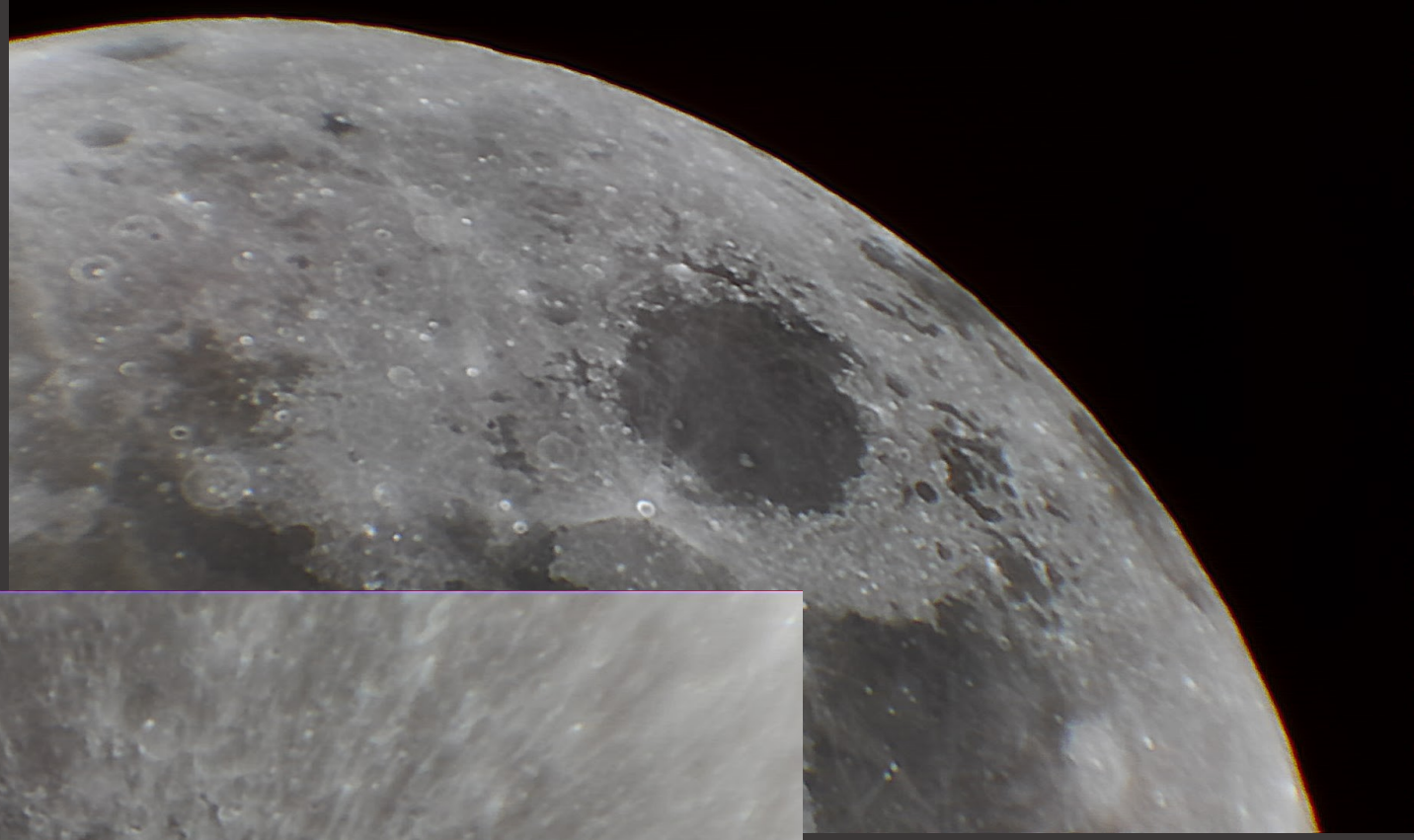


Focus on member's photos: Steve

- The Moon
- Olympus E- M5 camera with 150mm + 2X teleconverter (420mm 35mm equiv.)
- 1/320th f10

Focus on member's photos: Dean

- The Moon
- Skywatcher 127mm Maksutov
- Eq5 mountSV Bony 105 planetary camera
- SV Bony light pollution filter
- SER file stacked in Autostackert Registax for processing
- GIMP to adjust colour curves for more natural colours.







Focus on member's photos: Marc

- The Moon

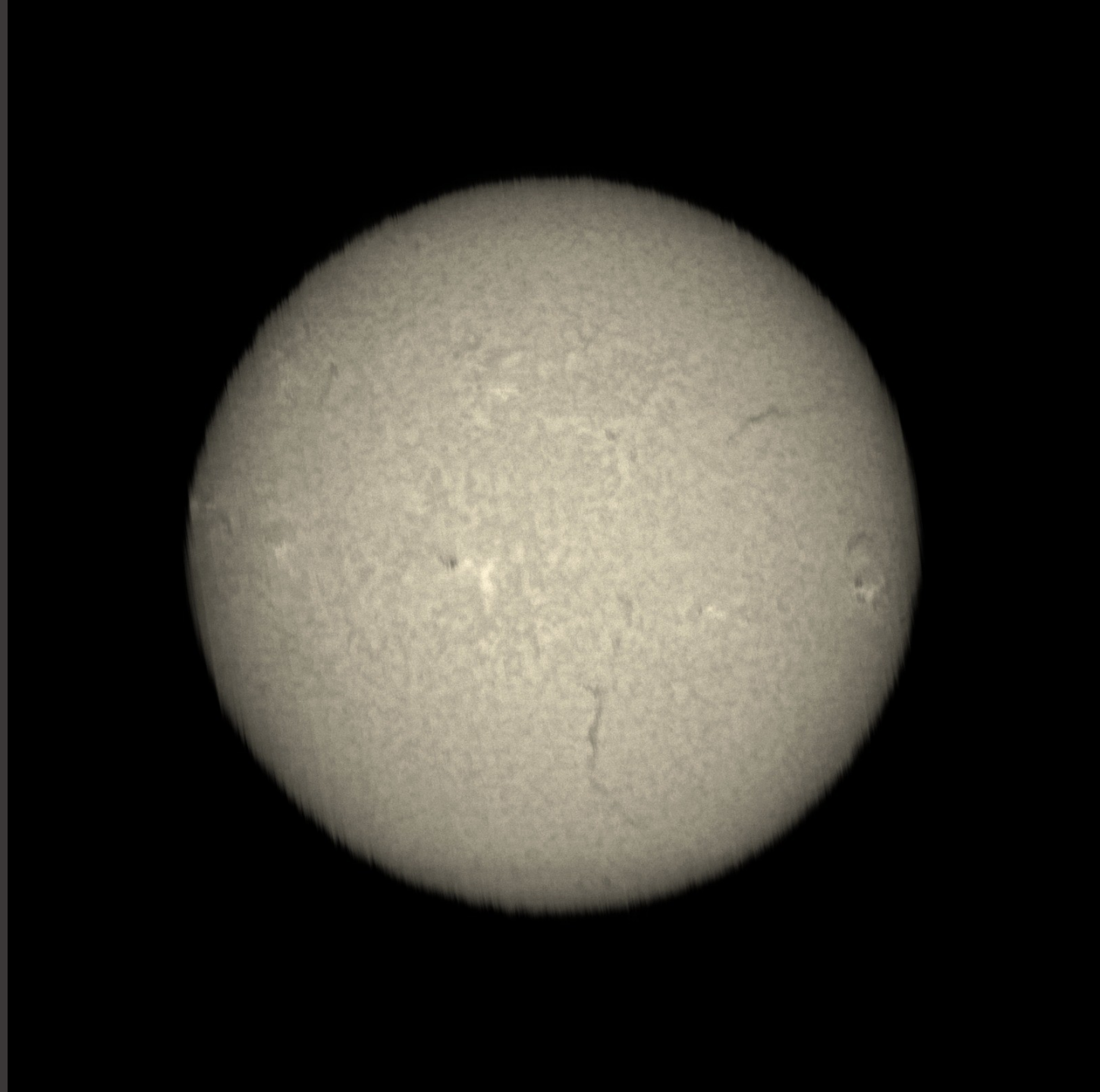


Focus on member's photos: Ranj

- The Sun
- Seestar

Focus on member's photos: Steve

- Sun in Ha using the Sol'Ex
- 3D printed



Focus on member's photos: Gareth

- M101, the Pinwheel galaxy
- 30 x 3min subs = 90min,
- Sky-Watcher ED80,
- Ares C (IMX533),
- Optolong L-Pro



Focus on member's photos: Eddie

- M51
- Seestar s50
- Over 4 nights. Approx 3700 x 10 sec subs
- Stacked in Siril finished in GraXpert for simplicity (except Denoise failed) then in photoAI to Denoise.





Focus on member's photos: Kevin

- NGC 5907 and SN2026 kid
- Seestar S50
- 6 mins



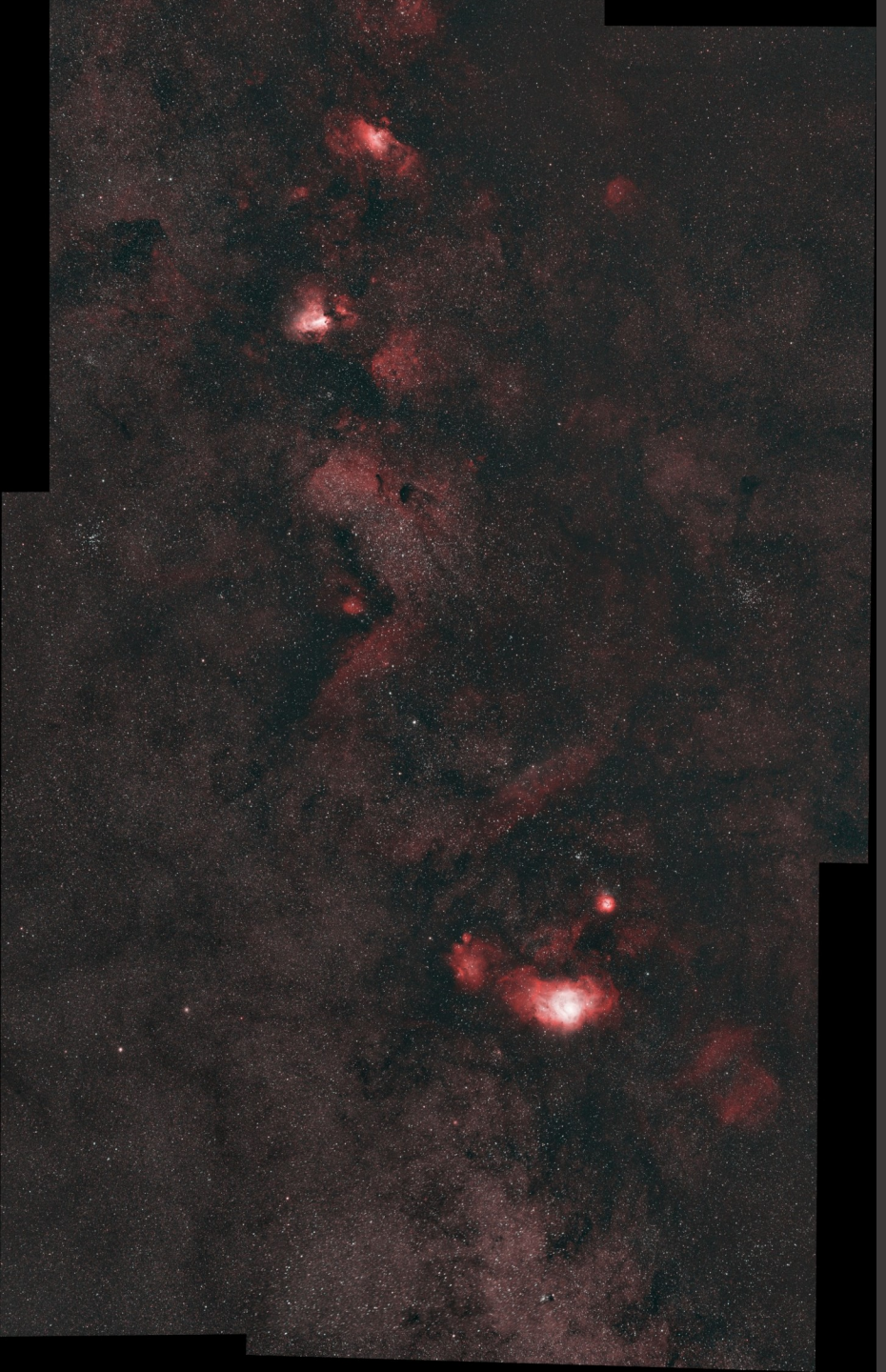
Focus on member's photos: Kabir

- M95
- 2 hours and 10 mins
- Celestron Edge HD8
- ASI2600MM mono camera
- LRGB and Ha
- Decision to Bin 2



Focus on member's photos: Brian

- M95
- Seestar S50 in EQ mode
- 595x20sec
- Processed in Siril and Gimp

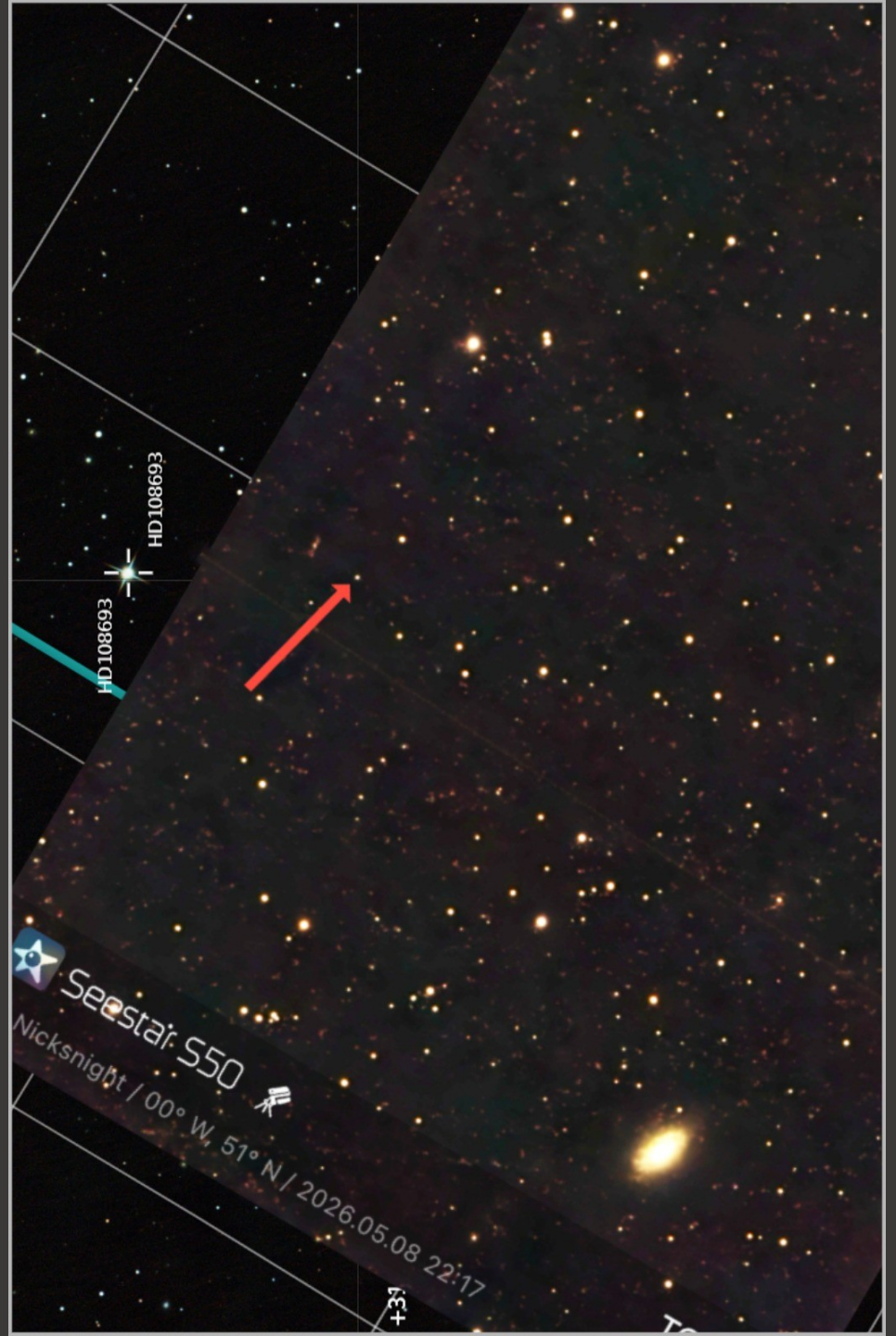


Focus on member's photos: Chris

- The Southern Milkyway
- A giant mosaic – 4 frames
- Remote Samyang 135, in Deep Sky Chile
- Cumulative exposure times across all four mosaic elements are 1h50m (22*300s) for Hydrogen Alpha and 55m (11*300s) for [OIII].
- HOO are mapped to RGB respectively for this representation.
- Processed with Siril.

Focus on member's photos: Nick

- Nick imaged a quasar (!) with the SeeStar.
- Online sources showed that TON618 is a hyper-luminous quasar located approximately 10.4 billion light-years away in Canes Venatici.
- It is optically near to NGC4414 a spiral galaxy 'only' 62million light years distant from Earth.



Thanks!



Lyrid Meteor Shower