Cover image - IC 4592 – the Blue Horsehead
By Chris Kostokanellis

SCORPIUS

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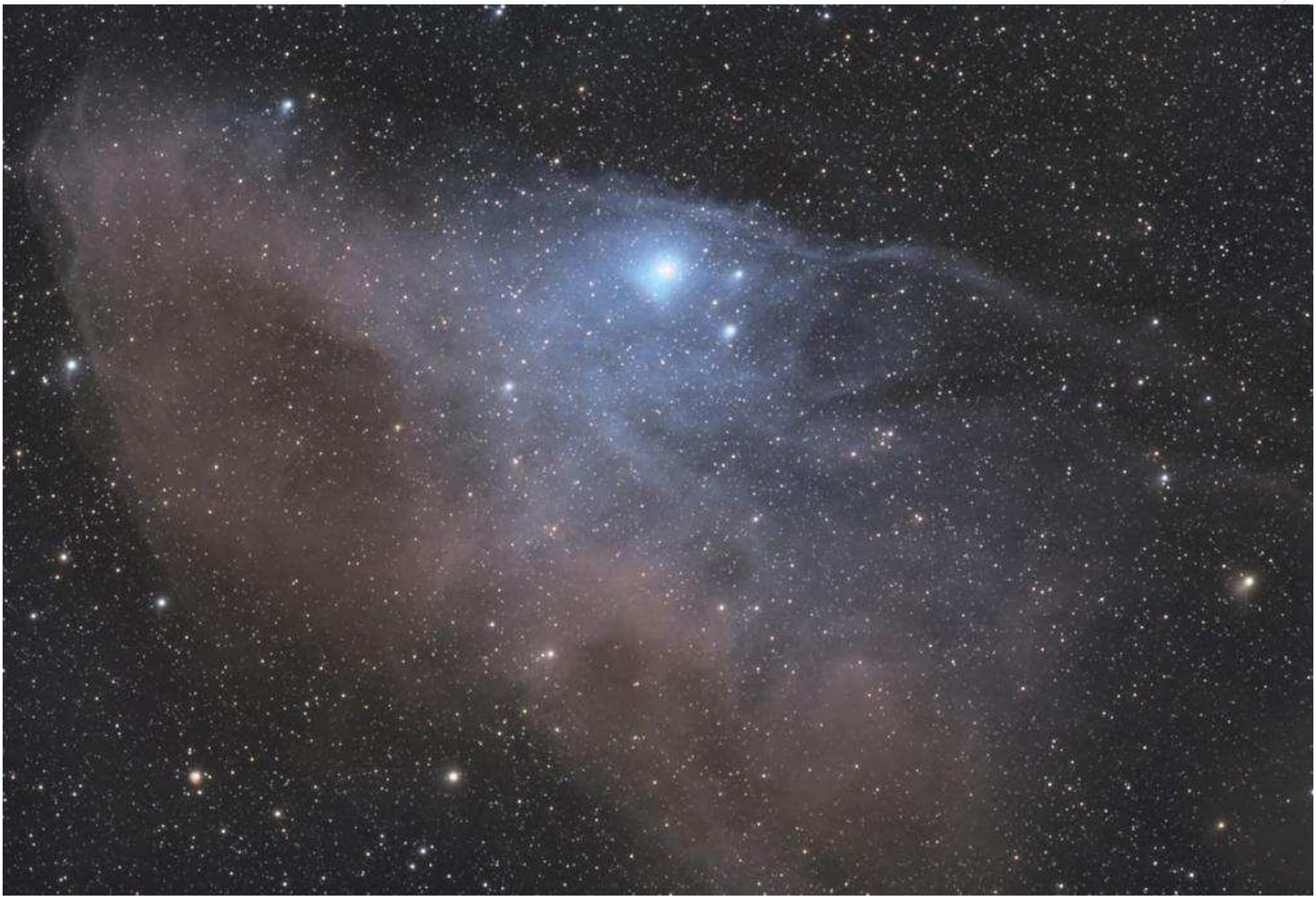
The Mornington Peninsula Astronomical Society (formerly the Astronomical Society of Frankston) was founded in 1969 with the aim of fostering the study and understanding of astronomy by amateurs and promoting the hobby of amateur astronomy to the general community at all levels.

The Society holds a focused general meeting each month for the exchange of ideas and information. Regular public and private observing nights are arranged to observe currently available celestial objects and phenomena. In addition, the Society encourages the service of its members for on-site or off-site educational presentations and observing nights for schools and community groups.



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Mornington Peninsula Astronomical Society

SOCIETY NEWS

Public Viewing Night July 4th - The July 4th public stargazing night at the Briars was attended by 64 visitors, with about 70% cloud cover across the evening, which no doubt might have dissuaded some from attending if they had a long distance to travel. This was the first time our replacement black, comfy, sturdy chairs had been used in the auditorium and, by all feedback received, were a hit.

After some quick outdoor observing beforehand by the earlier arrivals, everyone moved indoors for the talk. This was a special occasion, with it being Trevor Hand's 150th public talk at MPAS, and about 303 talks if you include all his cruise ship engagements.

This time the talk was about Mars; so Peter Skilton introduced the auspicious occasion to the audience, with a lit candle on a cake (150 candles wouldn't fit) complete with a bowl of 150 Mars bars and Milky Way bars for the audience. As this sugar hit was being handed out and absorbed, and Trevor began the talk, one young seated visitor asked me "is he really that old?" to which I replied, so as to keep a sense of mystery, "well, he's been around quite a while", and left it at that.

Following the talk by Trevor, the group moved outdoors to view the night sky under the improved conditions, with the Moon being an easy target.

Other members helping out and present on the evening included Sylvie Grandit, Phil Peters, John Goodall, Guido Tack, Stephanie Ng, Josh Spokes operating the big Dob on the upper slab, Nerida Langcake, Yvonne Hsu, Ben Claringbold, Katherine McCoy, Fred Crump, David Rolfe, Pam & Rick Kammerhofer, Chris & Nicki Kostokanellis and Greg Walton. *Regards, Peter Skilton*

Society Meeting July 16th - For those of you who are not yet subscribed (it's free) to the MPAS YouTube channel, the monthly meeting has been uploaded.

The meeting this month followed the AGM which seen NO changes to the committee members, and was about Reflections on Presenting over the years, alternatively titled Customs Confusion, Dinosaur Dung and Meteorite Mishaps, presented by Cruise Ship Enrichment speaker, Trevor Hand, on the auspicious occasion of his 150th public presentation at MPAS in the preceding week.

There was no Astrophotographic challenge this month, with Chris Kostokanellis away for work, so the current challenge is extended a further month. Guido Tack then presented Sky for the Month, including sharing about the new interloper speeding through our Solar System at the moment.

The planned presentation about the Australian Space Summit in Sydney, attended by 3 members earlier this year, was rescheduled to next meeting.

Dr. Sabine Hossenfelder from Munich University then grappled with the philosophical question of whether or not the past still exists, or is gone forever, and came to a conclusion.

We closed with the Evolution of the Moon after its formation, courtesy of NASA.
It is set to "Titans by Cold Cinema from the No Copyright Music channel.

You can watch it here by clicking on this link and going to the most recent video on the channel:
https://www.youtube.com/channel/UCm6XOkIcIflt4y0XRBXpXuw *Regards, Peter Skilton*

Sullivan's family inspects the sundial.

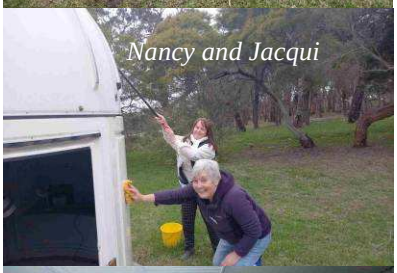
We had a visit from the late member Ian Sullivan's family. They inspected the sundial which Ian had specially made for the Briars location and donated to the Society.

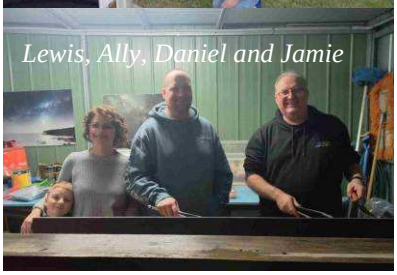
Left to right

Luke Gillespie
Aalyiah Dann
Liam Gillespie
Elvine Sullivan
Kim Gillespie
Rose Gillespie
Julie Moore

Working Bee and BBQ July 19th - Saturday's working bee and BBQ was just full on! It was 14 degrees, cold, windy and raining, but that didn't deter the 40 members who attended. We also had the pleasure of a guest speaker, Tim Patston. More about Tim below! And a warm welcome to new members, Erica and Ryan Burmeister.


New Dome base


Nancy and Jacqui


Lewis, Ally, Daniel and Jamie

The day started with the Cosmology group meeting at 1.45pm. The group meets every 6 weeks, and is very popular. Stewart Gangell presented the second half of his trip to NASA, Doug Gaze talked about the feasibility of traveling to other stars, and Brian Stephens looked at the Big Bang. 20 members attended.

At 4pm the working bee started, with Greg Walton and Chris Kostokanellis organising stage 2 of the new donated dome. The frame was finished last month, and this month it was filled with crushed rock, with pavers on top. I won't mention my poor lawn again. Many thanks to all that helped!

As it was raining on and off, we gave up the idea of any mowing, not that it really needed it. So apart from the brave members working outside, the rest of us headed indoors for some top shelf cleaning, mopping and de-webbing of the auditorium, observatory, and of course the toilet (thanks Jenny Thomas!).

Nancy O'Brien, Tony Pinolo and Jacqui Duffee took to cleaning the dome, inside and out. With mops and buckets, and lots of laughing, they did an awesome job. Thanks guys! Our regular Librarian and all-round good guy, Fred Crump cleaned the telescopes, and Simon Hamm cleaned around the sales area, with much help from everyone.

And I'd better not forget the kitchen crew, or I might not get fed next time! Too many names to mention, and wow, the food brought in by members to share was just unbelievable! I do remember Sylvie Grandit brought in a huge pot of soup, which was gone before I got to it! And big thanks once again to all that helped with the dishes!

Jamie Pole soon arrived with the monthly shop, and all the meat and supplies for the BBQ. Interestingly, Jamie also had what appeared to be a washing machine in the back of his car! It turns out it was just an extra chair, replaced free of charge as one was damaged in transit. They must have been extra careful about packing this one! The BBQ was soon fired up, with Jamie and Daniel Midwood juggling the very full load that was cooking!

Once everyone had finished working inside and out, and the BBQ and kitchen crew were ready, we all sat down to a delicious dinner, followed by a special presentation by our guest speaker on indigenous astronomy, Tim Patston. Tim enthralled us with his broad knowledge of indigenous culture, and their ways of learning and describing the stars. He also played two audio storytelling clips from the elders, which made us feel like we were there with them. It was awesome!

Tim Patston

Well, that's about it for now. At our next BBQ, we will be having another guest speaker on indigenous astronomy, Duane Hamacher. Hope to see you all then! (See photos).
Warm regards, Phil Peters

Scouts, Cubs & Guides Viewing Night July 25th - The night went ahead as planned at the earlier start of 7pm, with 58 visitors drawn from Joey and Cub packs from Devon Meadows and some from Somerville. It started indoors with the talk by Katherine McCoy and Peter Skilton, with questions ranging across numerous subjects, and had Joeys present who were very interested in Black Holes right from the start. And we were even asked about how we know the Sun is ~5 billion years old and halfway through its lifecycle, which was covered in an MPAS meeting a month or two ago.

Unfortunately, the evening was overcast and even drizzly throughout so the observatory remained closed. Therefore the indoor part went for nearly 2 hours answering questions. Astonishingly, apart from a couple of very young Joeys, the audience remained awake and engaged on a Friday night at the end of the working week. And so did the two presenters!

Members present outside and helping with the night, and ready to haul out the telescopes if any cloud break occurred, were Phil Peters, Simon Hamm, Ally & Daniel Midwood, Sylvie Grandit, Greg Walton, Ben Claringbold and Mark Stephens. *Regards, Peter Skilton*

Sporadic Viewing Night August 2nd - Last night we had a small group of members in attendance. Even though the moon was at first quarter, the viewing was pretty good. We kept all 4 telescopes in the observatory busy, tracking down most of our favourite objects.

Early on we looked at Mars now getting very low in the west. Still we could see Mars as a tiny burnt orange little ball.

We used a UHC filter to bring out the nebulas which are normally difficult to see with the bright moon. Carina Nebula NGC 3372, Lagoon Nebula M8, Trifid Nebula M20, and The Swan M17 were all easily seen. The Eagle Nebula M16 was just visible.

Then we found the Jewel Box NGC 4755 in the 127mm refractor and 350mm Meade both gave excellent view. We made a small jump to Acrux (Alpha Crucis) and spotted “Ruby” Delta Crucis in the same field of view -said to be the second reddest star in the sky. In the 127mm refractor we could easily see the tiny red star and then in the Meade Ruby Crucis looked brilliant. While near Crux we looked at NGC3918, a planetary nebula with a distinctive turquoise colour not unlike Uranus.

We looked at 47 Tuc NGC104 and Omega Centauri NGC5139, the 2 brightest globular clusters. Then we moved to the Butterfly Cluster M6 using the 8 inch Newtonian and 350mm Meade. We also spent some time looking at M24 star cloud which has many strings of stars, easily seen with the 8 Newtonian and 350mm Meade. This object is very easy to spot with the naked eye, being about 1 x 2 degrees in size.

The 6 inch Maksutov sat on the Moon all night with a 30mm eyepiece. We all could help going back to knock out our night vision on the Moon.

We spotted Saturn coming up over the wall of the observatory. So we sent the 6 inch Maksutov and 350mm Meade to Saturn. Even still fairly low, the seeing conditions were pretty good. Saturn rings are almost edge on and we even spotted Titan and one other of Saturn’s moons. We called is quits just after 11pm and parked the scopes and closed the roof. *Regards Greg Walton*

Public Viewing Night August 1st - The August public night at the Briars was attended by 66 visitors, with patchy cloud giving about 50% coverage across the evening. The talk indoors was given by Guido Tack, followed by stargazing outside.

Members helping and present outside during the evening were Greg Walton, Peter McConnachie, Julie McErlain, Peter Skilton, Sylvie Grandit, Phil Peters, Simon Hamm, Adrian Boschetti, John Goodall, Mark Stephens, Katherine McCoy, Wayne Redpath, Lucas Cusack, Aaron and Ethan Yuen, Claringbold, Jason Heath and Alan Predjak. *Regards, Peter Skilton*

School Viewing Night August 6th - August 6th saw Glenferrie Primary School on camp at the Briars, and we were the after-dinner entertainment. We could hear the thunderous steps as 72 excited Year 3/4 pupils, plus teachers on top of that, converged on the observatory from next door. The evening began with Lunar observing outside with about 70% cloud cover. The weather prediction was for thickening cloud as the evening progressed so this was a precautionary measure.

The talk inside then followed, given by Katherine McCoy and Peter Skilton, with no shortage of audience questions throughout the entire talk, including some meteorological ones.

Members outside helping run the evening were Sylvie Grandit, Ally Midwood, Phil Peters, Mark Stephens, Adrian Boschetti, Julie McErlain, Manfred Berger, Ben Claringbold, Simon Hamm and Greg Walton. *Regards, Peter Skilton*

School Viewing Night August 11th - The all-of-school Monday night at Cornish College in Bangholme was our first outreach night for National Science Week this year and it buzzed with activity. There was even a barbecue going with 400 sausages outside the talk venue, and the chorus of frogs all evening was very audible near their lake.

It was a cool, but windless, August evening. 150 ventured out for a visit by MPAS; plus one girl also brought along her blue-tongue lizard for an outing and telescope experience. We've been to this school several times in past years, but not since the emergence of Covid-19. The organising science teacher at that earlier time, Julie, was still there this time, and fondly remembered us, and was delighted to see our return for the new generation of kids coming through.

Inside their Sustainability Centre, Julie introduced MPAS to the families. Then the talk was given by Katherine McCoy and Peter Skilton, before everyone raced out to catch the 8:02pm appearance of the International Space Station in the WNW sky. At a brightness of magnitude -1.0 it should have been readily visible by eye, for about a minute only, as it was the 2nd transit of the evening, about a handspan above the horizon. However, I heard that no-one on the field was able to find it, though I also heard they were looking about 90 degrees to the south of the correct spot which also had the lowest unobstructed horizon to help. Better luck next time.

The skies were cloudless all evening, and the Jewel Box and Omega Centauri were on show, as well as a wonderful view of the Trifid Nebula captured on the Seestar. The captured image was astonishingly good, even though an almost Full Moon was low in the sky, and there was considerable light intrusion from their Senior Studies Centre to the south. The Moon, naturally, was also a favourite target once its yellowish hue rose in the east, and Phil Peters had the longest queue on his telescope when his was the only instrument positioned to see it first.

Members operating the telescopes included Nerida Langcake, Jamie Pole, Manfred Berger, Mark Stephens, Sylvie Grandit, Pia Pedersen, Greg Walton, Ben Claringbold and Adrian Boschetti on his first outreach school night. *Regards, Peter Skilton*

Beazley Reserve Viewing Night August 13th - Our Science Week roll continued on 13th August, with 48 members of the public at the Chelsea Heights Community Centre. This evening was 2 years in the planning, and finally came to fruition.

The talk indoors was given by Katherine McCoy and Peter Skilton, then everyone moved quickly outside to catch the International Space Station passing by at about the same time as yesterday's event, just after 8pm. Some of the visitors were able to see it readily, while others took too long to venture outdoors and so missed it.

There were football floodlights turned on right up until about 8 pm as everyone was ready to go to the telescopes assembled on the edge of the oval. Once the lights were out it certainly helped with seeing the stars, but Mars was easily visible even with them turned on.

Other members present and helping at the telescopes included Andrian Boschetti, Manfred Berger, Chris Kostokanellis, Jamie Pole, Pia Pedersen, Ben Claringbold, Sylvie Grandit, Fred Crump, Phil Peters, Greg Walton and a surprise visit by Kitty Penfold.

The skies were cloudless throughout the evening, which is always noteworthy at this time of year, but dew was starting to form by the time we packed up to leave. *Regards, Peter Skilton*

School Viewing Night August 14th - It was a great and restful night out at Balnarring Primary School on 14th August. This was an all-of-school event as part of Science Week, with the Principal and several teachers in attendance as well as 245 kids and parents. I'd heard that Fred Crump had visited this school a few weeks beforehand and spoken with the Principal. So the school community had been whipped up into a frenzy for our visit, raising expectations.

With clear skies all day long, and a fast approaching cold front with total cloud cover forecast for early evening about 6 pm, it was a race against time.

The decision was made at 6:30 pm not to press our luck, and to start with the telescopes outside on the oval as soon as most families had arrived. Consequently there wasn't time to wrap the many handheld torches in red cellophane first, which was the original plan before going to the telescopes.

I wasn't up on the oval myself at 7 pm but I have little doubt that everyone walked calmly, quietly and in careful formation up to the telescopes. Not likely! I heard the entrance gate was hurriedly unlocked to allow the Society telescopes in and their setting up to commence, after driving over a narrow drawbridge onto the oval.

The International Space Station then made quite a lengthy passage across the south-west up to 37 degrees elevation, so was seen easily by a lot of people on the oval. Then Mars featured prominently in the still mostly cloud-free skies, while other instruments were on Omea Centauri and the Jewel Box. Fortunately the cloud front was delayed for a couple of hours. After about 30 minutes outside, the cloud arrived, first obscuring Mars before relentlessly marching forth across the sky.

Members helping with telescopes included Ally Midwood on her first outreach night, bravely operating a telescope on her own while the throng of excited kids swarmed around the telescopes like locusts at feeding time. Phil Peters reported having his Dobsonian swatted around like a pinball machine, and constantly requiring re-aiming. Other members with telescopes included Adrian Boschetti, Stephanie Ng, Chris Kostokanellis, Ben Claringbold, Greg Walton, Dave and Jamie Rolfe, Fred Crump, Sylvie Grandit and Katherine McCoy. Apologies if I missed anybody.

After the quiet observing on the field concluded, it was indoors for the talk given by Katherine and Peter Skilton in the gymnasium. The seats were set up in a U-formation around the sides of the gymnasium and even a bit behind the speakers, with mats on the floor as well for the younger kids to sit cross-legged on. The arrangement and crowd size had the feel of a Taylor Swift concert, though I'm afraid my evening outfit was just not on the same glittery level as that, and it certainly wasn't as aerobic a performance.

The organising teacher, Kate, played a short video made by one of the pupils about spectroscopy and how we know what's out there. It was impressively good and entirely accurate and up-to-date with James Webb images. Then came our turn, and with the number of questions arising, we only got as far as the planet Mars before it was home time. Black Hole and alien questions were in abundance, and I heard afterwards they are studying about Black Holes in a fortnight from now. And this is a Primary School. The meteorite was very popular as always.

It was an excellent evening and the school was super impressed, which is always good for the first time we've visited them. Special thanks to the attending members who turned up enthusiastically with instruments, even in the face of a not-so-favourable weather prediction. It's the nature of our pastime, that it always pays to be optimistic.

Regards, Peter Skilton

Public Viewing Night August 15th - The second public night at the Briars for August, being held in National Science Week, went ahead last night. Driving there, it was raining and horizon-to-horizon cloudy; however, you can only be optimistic when it comes to stargazing. There were 63 visitors in attendance, some driving from north of Melbourne, who heard Trevor Hand give a scary talk on Meteorites: Hit or Miss. As it turns out, he hit the mark and the talk prompted quite a few sales of small meteorites at the counter afterwards. Perhaps we should also sell some hardhats as well, so as to protect them from lumps of metal and rock falling from space.

The sky was abysmal right up until near the end of the talk. Then, on cue, the clouds parted and magically dissipated within 5 minutes, giving 95% clear views and 5% of only high-level cloud to the north; and that held for the rest of the evening. With no Moon in the sky, this meant the deep sky objects were easily found, and the Seestar had fun on Omega Centauri. Saturn made its reappearance, while Mars was too low for most to see in time. The visitors were all very impressed with the sight of the ringed planet, even though the rings are still only starting to open up from being edge-on.

Other members present and helping with the evening included Adrian Boschetti, Greg Walton, Julie McErlain, Mark Stephens, Chris Kostokanellis, Phil Peters, Manfred Berger, Simon Hamm, Ben Claringbold, Peter Skilton, John Goodall and Sylvie Grandit.

Regards, Peter Skilton

Hong Kong Viewing Night August 16th - saw our last stargazing night for this year's National Science Week. At 7:15 pm we had two large coach loads of visiting families from Hong Kong arrive in the car park next to us at the Briars. I heard they'd all been to eat beforehand at McDonalds somewhere down Dromana way. Fortunately, no-one was in the education camp next door, so parking and U-turning the long vehicles was straightforward for the drivers.

The group of 100 visitors included 97 family members of all ages associated with the PLKFLPY Primary School in Hong Kong, and the main bilingual Primary School teacher, Ian Chung, who'd organised it all. The combination of letters in the school name is a district name abbreviation for the school. We also invited both coach drivers to sit in with them, which they gladly agreed to, instead of taking a nap in their coach for 2 hours.

Ian had a Master of Science in Electrical & Electronics Engineering from the Chinese University of Hong Kong, and works as a Primary School Teacher, and had a clear passion for astronomy education. The auditorium was quickly packed with keen listeners who filed in systematically, and all were very enthusiastic and extremely friendly throughout the evening. I think it's been the biggest crowd we've had in there for a talk for quite a while. The talk indoors was given by Katherine McCoy and Peter Skilton, both colour co-ordinated and wearing traditional red and gold, of course.

Possibly needing to use a microphone to be heard, in a stroke of comedic brilliance, Katherine quipped that it was because she is softly spoken, even though her husband doesn't think so. Well, there was no English translation needed for that one, as they all understood and there was a round of laughter to break the ice for the evening.

Because the evening started under total cloud cover, the talk went for well over an hour, and only on a couple of occasions did Ian chime in to translate something into Chinese language for the audience, especially for the seniors. For example, they weren't familiar with European constellations, because the Chinese have their own set instead, and he kindly did the translation and there was plenty of nodding after that.

Throughout the talk there was a lot of photography occurring by the audience, and afterwards there were photo opportunities holding the meteorites. One very young girl was sitting near the front with her mother, and was very intently watching the short astronomy videos we showed for those who preferred to stay inside in the warm. There's probably a future scientist there.

It transpired that they'd arrived in Australia about 3 days ago and sadly still hadn't seen any Australian animals, so I explained there were emus, wallabies and kangaroos at the Briars, and they might be watching you, even if you can't see them. They looked a bit puzzled. Then, on cue, Phil Peters came in the door at the back of the auditorium and I asked him how big the kangaroos are here. Well, he jumped up and down with his paws up, which to me looked like an impression of a demented giant rabbit, but to them they immediately understood kangaroo, and laughed.

By the time they emerged to head for the merchandise counter it was about 9 pm and the skies were very fast clearing of clouds. By 9:30 pm they were cloud-free except for maybe 5% on the western horizon. From that point onwards, it was full-on observing activity on the slabs and inside the observatory buildings, with people everywhere. We'd lost a few members who'd just turned up temporarily for the evening to say hi, before heading somewhere else, or had to leave unwell, but fortunately we had enough remaining dedicated members to cope under the now clear skies. The Jewel Box was very popular, as was Omega Centauri, but the highlight was seeing Saturn and Titan clearly in the east. Several of the parents said to me that it was the first planet they'd ever seen in a telescope and were thrilled. And they just marvelled at how dark our skies were at the Briars, and how lucky we are.


By Sylvie Grandit

Group photos were taken as well down near the lower slab, and some smaller ones indoors after the talk. I think this group will probably remember the night for a lifetime. Ian Chung was a past Vice-President for the Hong Kong Astronomical Society, so was no stranger to astronomical concepts. They only have two societies, each with hundreds of members. Although they had an observing site, they gave up on it when light pollution made photography and stargazing intolerable.

A big thank-you to the other members who believed the weather forecast and optimistically stayed with the telescopes and helped run a fun evening, especially Greg Walton, Pia Pedersen, Simon Hamm, Greg & Isaac Markowsky, Katherine McCoy, Adrian Boschetti, Chris Kostokanellis, Ben Claringbold, Fred Crump and Sylvie Grandit. Also Jamie Pole, Dave Rolfe and Nerida Langcake signed the log. Apologies if I missed anyone who forgot to sign the book.

The visitors had originally paid the coach drivers to hang around for 2 hrs up to 9:15 pm but the evening just kept going and no-one seemed to mind. They all went home very excited; many would have fallen asleep in the coaches on the way back to the hotel in Mt. Waverley. Unfortunately, one visitor mislaid her smartphone that she'd been using to take photos. Despite a concerted search of the grounds, buildings and even rubbish bins, by half a dozen of us that night and by Phil the next morning, nothing was found or heard when trying to ring the number. Hopefully it was found misplaced in a pocket or bag later at the hotel so the digital detox was only a short term pain.

Regards, Peter Skilton

Society Meeting August 20th - In recognition of the passing of NASA Astronaut, Jim Lovell, the meeting this month was about Lunar Geology, and featured 2 public talks. The first was about Apollo and the Geology of the Moon, presented by Dr. Harrison Schmitt soon after his return to Earth from the Apollo 17 mission. The second was about From Apollo to Artemis: Paving The Way To The Next Giant Leap in Lunar Exploration, by Dr. Giulia Magnarini, Planetary Geomorphologist from the Natural History Museum, London.

A bumper edition of the Astrophotography challenge was presented by Chris Kostokanellis, covering the past 2 months. Peter Skilton then presented Sky for the Month, based on slides provided by Guido Tack while he was in Scotland.

Amy Shira Teitel, a Canadian Space Historian based in Los Angeles, who visited the Briars in 2016, then shares about what happened to the missing Apollo missions 2, 3, 18, 19 and 20.

We close with an update to the famous Elements Song, courtesy of the Royal Society of Chemistry. The original version by Tom Lehrer in 1959 (set to the tune of The Major General's song from Gilbert and Sullivan's The Pirates of Penzance, was renewed in 2019 as part of the International Year of the Periodic Table.

You can watch this meeting @: https://www.youtube.com/channel/UCm6XOkIcIflt4y0XRBXpXuw *Regards, Peter Skilton*

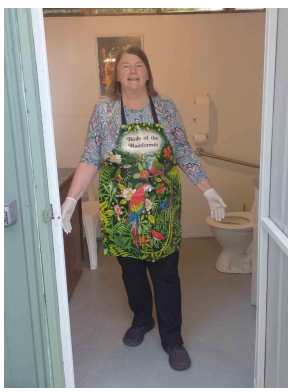
Members Night BBQ, Working Bee August 23rd - Saturday's working bee and BBQ was a very special day indeed. We had the addition of our new dome, a great presentation from our guest speaker, Duane Hamacher, and a visit from friends from Willum Warrain! Over 60 members and guests attended.

With such a large turnout expected, the lawns needed to be mowed before the members' cars arrived. Many thanks to Daniel Midwood, Mike Smith and others, who were quick to jump in and get the main areas mowed and Whipper Snipped before the rush. And big thanks once again to Jenny Thomas, who did a stellar job of cleaning the toilet shed.

Greg Walton and Manfred Berger soon started assembling the dome, with the help of Ben Claringbold and Mike Smith. All the pieces had to be moved from next to the garden shed nearby, then assembled on the platform. Greg then drilled and bolted them down to the pavers. This took quite a few people to help at first, but as work progressed, I must admit the scene looked more like council workmen out on the job, with a couple working, and the rest watching! It also needed a good wash, with Ben and Isaac Markowsky using the pressure cleaner to remove the grime from being stored outside. While Geoff freed up and oiled the wheels the dome turned on.

Up in the main auditorium, the tables had to be set up in a special way for dinner due to the increased numbers expected. Sylvie Grandit, Jacqui Duffee and Ally and Lewis Midwood did a top job of getting them just right. Next door in the kitchen, there was the usual hive of activity, with Jamie Pole arriving with the monthly shop, and all the meat and goodies required for the night. With everyone chipping in, they made short work of putting the shopping away and getting things ready for dinner.

Cooking started early on the BBQ to accommodate such a large crowd. David Rolfe and Jamie did an excellent job, with at least two batches needing to be cooked. By this time our guest speaker Duane Hamacher and partner Alex had arrived, and the BBQ window became a good spot to socialise, with a drink and a good chat.



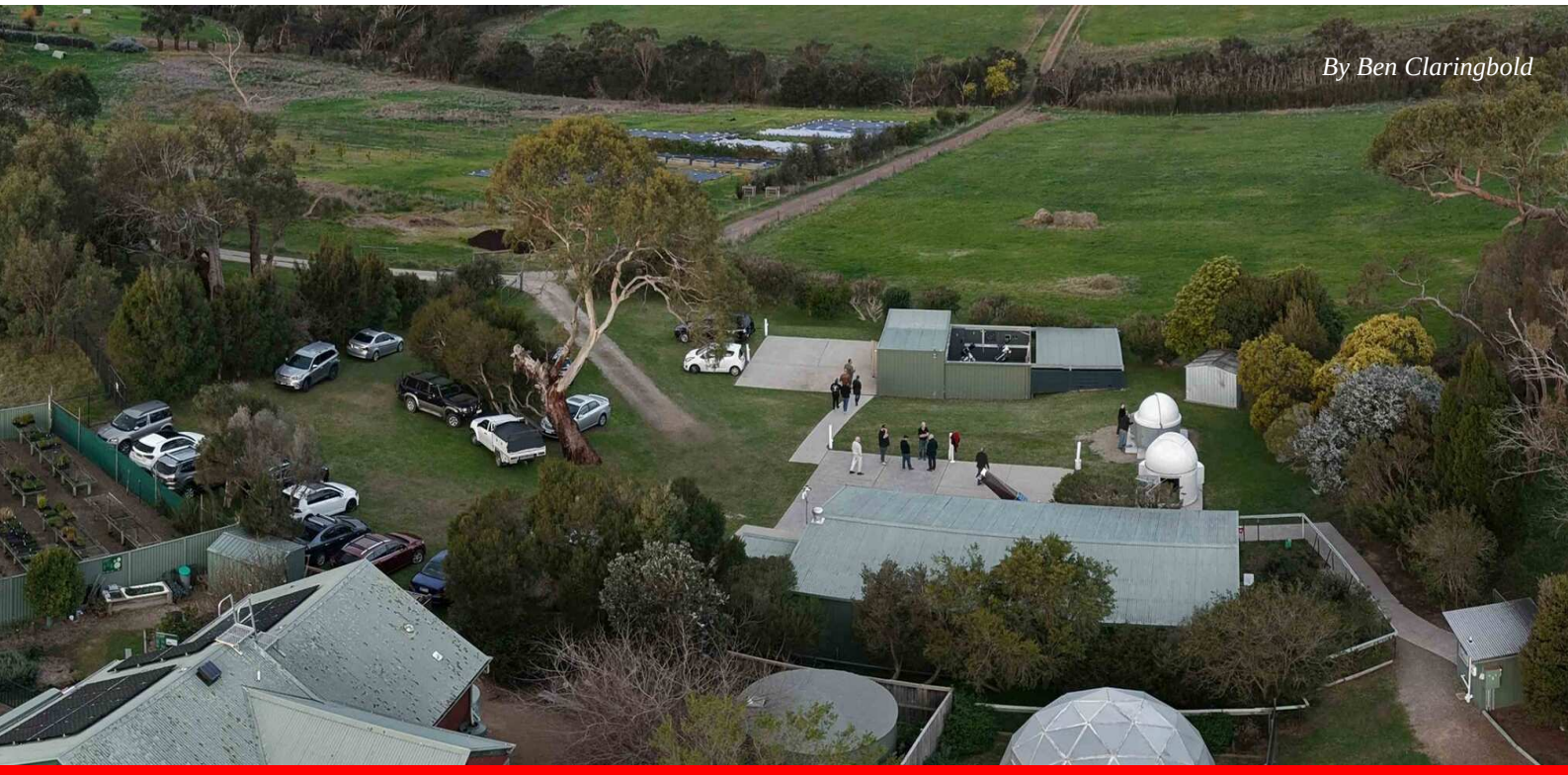
Our guests from Willum Warrain in Hastings also joined us, with a few visiting the wildlife sanctuary on the way in. I was really pleased to catch up with Uncle John, the indigenous elder, and the rest of the group were just lovely to chat with as well. After a quick tour of the site, they all happily settled in.

Before we knew it, dinner was being served with a full house! There was a great selection to choose from, with many delicious dishes brought in by members, as well as the usual fare. Everyone was keen to hear Duane's talk on indigenous astronomy, and he didn't disappoint, with a very strong and detailed presentation. There were many questions afterwards, and some valuable feedback from Willum Warrain and others regarding sacred sites.

A nice selection of very popular desserts followed and, being a clear night, Greg had the telescopes up and running. This was a great opportunity to show our guests the stars, not to mention members taking advantage of the clear sky. I remember we saw The Jewel Box, Omega Centauri, Alpha Centauri, the Butterfly Cluster, and then Saturn after it rose around 8 pm.

After a busy but very rewarding day, with great company, an excellent talk, and viewing the stars, it was once again time to say goodnight. Hope to see you all again next month, and if you'd like to see a drone time-lapse of the dome by Ben Claringbold, just click the link below. And check out the photos as well! Warm regards, Phil Peters

Drone view, by Ben Claringbold - https://drive.google.com/file/d/1fDe0Hx78VyyWXueaN0FeouyueLsyDIZh/view?usp=drive_link

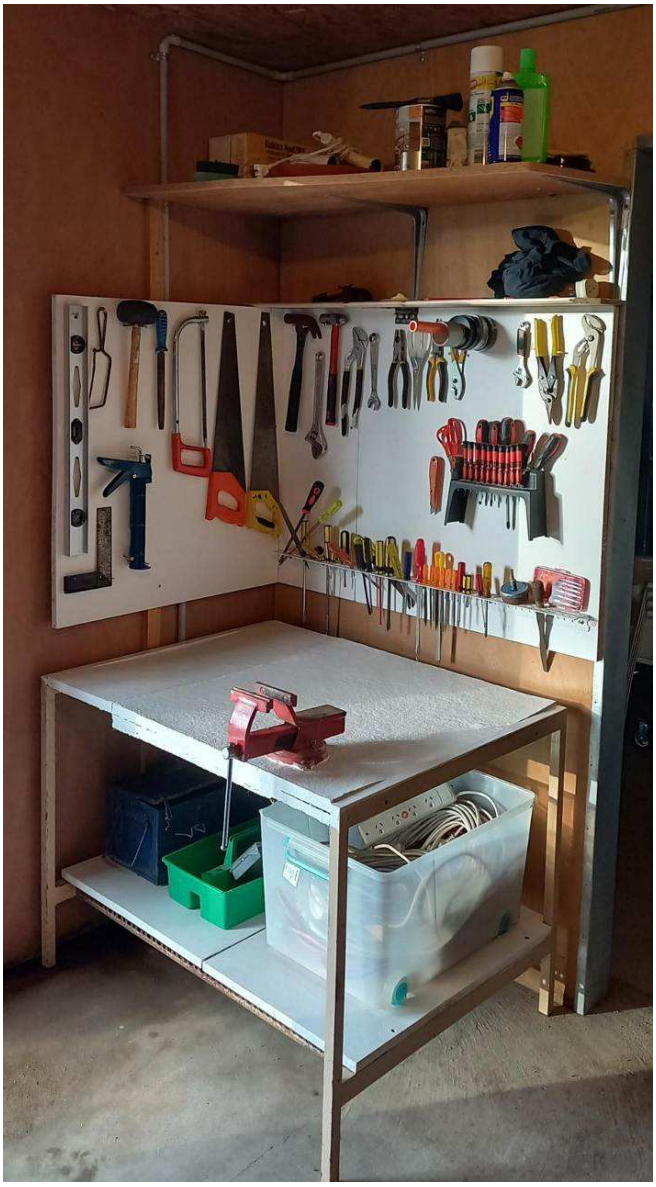


OBSERVATORY UPDATE

By Greg Walton

Clean-up of the workbench in the observatory - 29 July 2025

Attached shadow boards to the wall behind the workbench and hung the tools, also fitted a shelf under the work bench and painted the top white. *See right*



Phillip Island astro society reborn.

Members might recall a new astro society that Eden White started on Phillip Island a few years ago; it had gone dormant as a home couldn't be found.

It has now been relaunched as the Island Astronomy and Cosmology Association, now based at Newhaven College on Phillip Island. The similarity with our Society's early history is clear, for those who were around in the early days when Frankston High School, Monash University Peninsula Campus, and Peninsula School (Grammar) premises were our home base at various times.

The collaboration with the high school enables the new club to help their students with astronomy, have a base for amateur astronomy across the Bass Coast region, and in return have use of the equipment there. They've received an impressive donation of a fully automated robotic dome with a 14 inch telescope, fully equipped for astrophotograghy, and able to be used entirely remotely. They also have 4 other large portable telescopes able to be used for public nights.

Amateur astronomy certainly appears to be thriving in the State.

Regards, Peter Skilton

This year's Astrophotography Workshop will be a members only event.

The cost will be $10 per person, and will include Pizza, a drink, Tea and Coffee.

There will be presentations and demonstrations on a variety of Astrophotography techniques and equipment, as well as a practical imaging session, where members will be able to get help with wide field imaging, as well as attaching their camera to one of the MPAS telescopes for some deep sky imaging.

If you have experience in Astrophotography, or are working on a particular Astrophotography project and would like to present a short talk at the workshop, please let us know.

So charge your batteries, pack your dew straps, grab you tripods and camera, or Astrophotography rig, and we'll see you there!

Bookings via Try Booking.
https://www.trybooking.com/RKCQ

Chris Kostokanellis.

WHAT'S ON

The 2025 Timetable of Public events.

SEPTEMBER
Monday 1st, 7pm Briars. School viewing night, Toorak College. Speaker TBD. 66 anticipated year 3/4.
Tuesday 2nd, 7pm Briars. School viewing night, Toorak College. Speaker TBD. 65 anticipated year 3/4.
Friday 5th, 8pm Briars. Public stargazing night. Speaker TBD. 90 anticipated.
Saturday 20th, 4pm Briars - Telescope learning - (Booking required)

OCTOBER
Friday 3rd, 8pm Briars. Public stargazing night. Speaker Trevor Hand. 4 booked, 90 anticipated.
Thursday 16th, 7pm Briars. School viewing night, Valley Grammar. Speaker TBD. 65 anticipated year 3.
Friday 24th, 8pm Briars. Scouts, Cubs & Guides. Speaker TBD. 90 anticipated.

NOVEMBER
Friday 7th, 8pm Briars. Public stargazing night. Speaker Trevor Hand. 4 booked, 90 anticipated.

DECEMBER
Friday 5th, 8pm Briars. Public stargazing night. Speaker Trevor Hand. 4 booked, 90 anticipated.
Saturday 6th, 7:30pm Briars. Christmas Concert with Southern Peninsula Concert Band. MC Peter Skilton. Bookings not yet open.

To attend the school events and scout/girl guide events, these days you need to have a Working With Children check done first. It takes about a fortnight from the time you apply online to when you get the card in the mail. For volunteers it is free. It's essentially a check of police and justice records over the decades that sees if there might be anything in the past that would preclude participating in these sorts of outreach events involving kids. Once you receive your card, let the Secretary know your card number and expiry details as we are required as an organisation to record them.

https://www.workingwithchildren.vic.gov.au/ *Regards, Peter Skilton*

Call for articles.

Members please write a story about your astronomy experiences, subject of interest, tips and tricks, how you got into astronomy, and also please add some pictures.

Send them to the editor: Greg Walton gwmpas@gmail.com

New Members Welcome

Andrew Wilson
Craig Hill
Danielle Nicholas
Kim, Oliver & Aleah Hodgetts
Georgie Puschner
Dianne Morrissey
Sarah Galloway
Lodi & Finn Giovanni
James Muscat & Jason Sillery

MPAS SUBSCRIPTIONS 2025

Each ticking over of the New Year also means that Society fees are due to be paid. The committee has worked hard to ensure that 2025 fees are still the same as the previous many years' prices. So to assist the society in maintaining the facilities and services we provide and share, we appreciate your prompt payment for each and every year ahead.
As a reminder, the following structure of the 2025 fees is:

SOCIETY FEES

$50 – Full Member
$45 – Pensioner Member
$65 – Family Membership
$60 – Family Pensioner Membership
See more options on-line

Subscriptions can be paid in a number of ways:
- **On-line (preferred, see at right)**
- **Cash payments to a committee member**
- **Send a cheque, made out to "Mornington Peninsula Astronomical Society", to MPAS, The Briars, 450 Nepean Highway, Mount Martha VIC 3934 (The P.O. Box in Frankston is no longer used).**
- **Make a direct electronic payment into the society working bank account (state your name clearly).**

The account details are BSB 033-272 Account 162207. Remember to add your name and details to the transfer so we can identify the payment in the bank records. If you have any concerns please talk to a committee member.

JOIN NOW

You can renew your membership online using the link included in the annual mailout email, which is sent near the end of each year. Please ensure to renew before Feb 1. Any late renewals may be required to re-join as a new membership.

CALENDAR — September / 2025

Red Days indicate School Holidays

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 **Toorak College**	2 **Toorak College**	3	4	5 **Public night 8pm**	6
7 **Father's Day**	8 **Full Moon** **Lunar eclipse 4am** **Saturn right Moon**	9	10 **Moon at 364,777km**	11	12	13 **APW** **Astrophotography workshop 4pm**
14 **Last Quarter**	15	16 **Jupiter right of a thin crescent Moon dawn**	17 **Society Meeting 8pm AGM**	18	19	20 **TLD 4pm** **BBQ 6pm**
21 **Saturn at opposition**	22 **New Moon**	23 **Equinox** **Neptune at opposition**	24 **Mars above Moon**	25 **Vesta near Nu Scorpii**	26 **AFL** Public Holiday **Moon at 405,548km**	27
28	29	30 **First Quarter**				

March Events

Public night - 8pm to 10pm on the 5th @ The Briars
APW - Astrophotography workshop - 4pm to late on the 13th @ The Briars (Booking required members only)
Society Meeting - 8pm to 10pm on the 17th @ The Briars (Public & members)
TLD - Telescope learning - 4pm, **Members night BBQ** - 6pm on the 20th @ The Briars (Public & members - Booking required)
Watch your emails, as on any clear nights the Observatory may be opened for members-only viewing.

CALENDAR — October / 2025

Red Days indicate School Holidays

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 **Vesta near Psi Ophiuchi**	2	3 **Public night 8pm**	4 **NASA Moon Day**
5 **Daylight Savings Starts**	6 **Saturn above Moon**	7 **Full Moon**	8 **Moon at 359,819km**	9 **Comet 210P near NGC6541**	10 **Taurids meteor shower peak**	11 **1:45pm Cosmology**
12	13	14 **Last Quarter** **Jupiter right Moon dawn**	15 **Society Meeting 8pm** Rhea shadow transit 10pm	16 **Valley Grammar** **Vesta near NGC6235**	**LDSP** 17	**LDSP** 18 **Working Bee 4pm** **BBQ 6pm**
LDSP 19 **Mars and Mercury 2 degs apart**	**LDSP** 20 **Orionids meteor shower peak**	21 **New Moon**	22 **Vesta near NGC6287**	23 **Mars and Mercury right of a thin crescent Moon**	24 **SCAG** **Moon at 406,444km**	25
26 **Scorpius Deadline**	27 **Comet 210P near NGC6268**	28 **Comet 210P near NGC6242**	29	30 **First Quarter**	31 **Halloween**	

April Events

Southern Comets website - http://members.westnet.com.au/mmatti/sc.htm
Public night - 8pm to 10pm on the 3rd @ The Briars
Cosmology group meeting - 1:45pm to 4pm on the 11th @ The Briars
Society Meeting - 8pm to 10pm on the 15th @ The Briars (Public & members)
LDSP - Little Desert Star Party - 17th to 20th @ Nhill
Working Bee - 4pm, **Members night BBQ** - 6pm on the 18th @ The Briars
SCAG = Scouts, Cubs & Guides @ the Briars 8pm to 10pm, on the 24th @ The Briars

THE BRIARS SKY

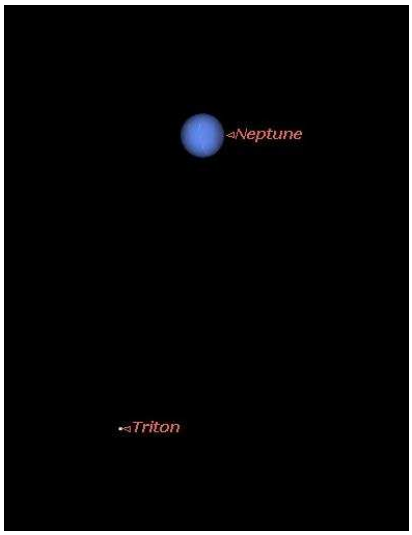
By Greg Walton

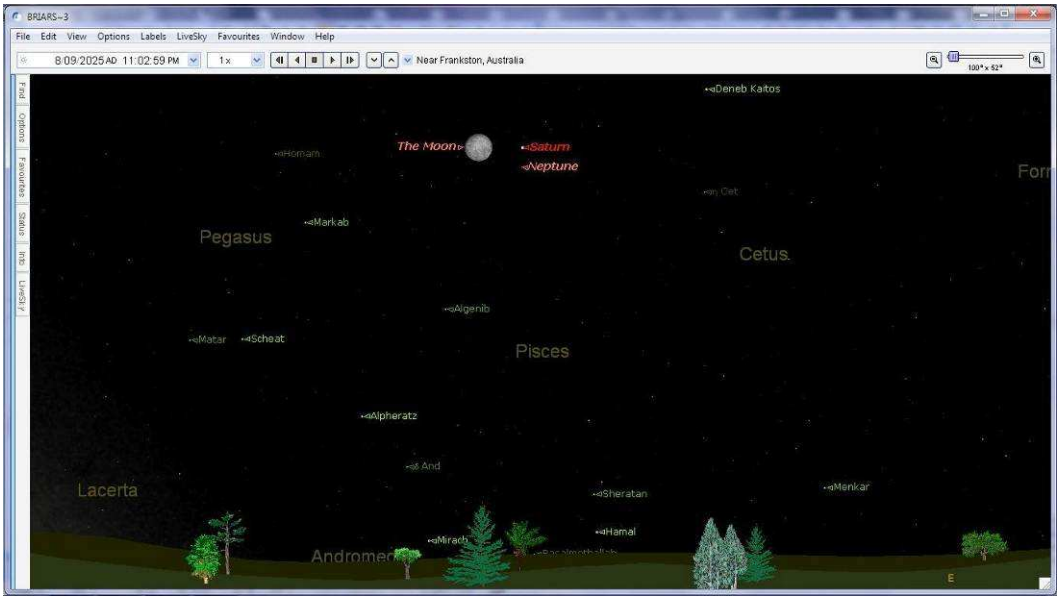
Mornington Peninsula Astronomical Society

Saturn at opposition on 21st September

On the evening 8th of September, Saturn and Neptune will be just right of a full Moon, which won't affect the viewing of Saturn or Neptune as they're very bright.

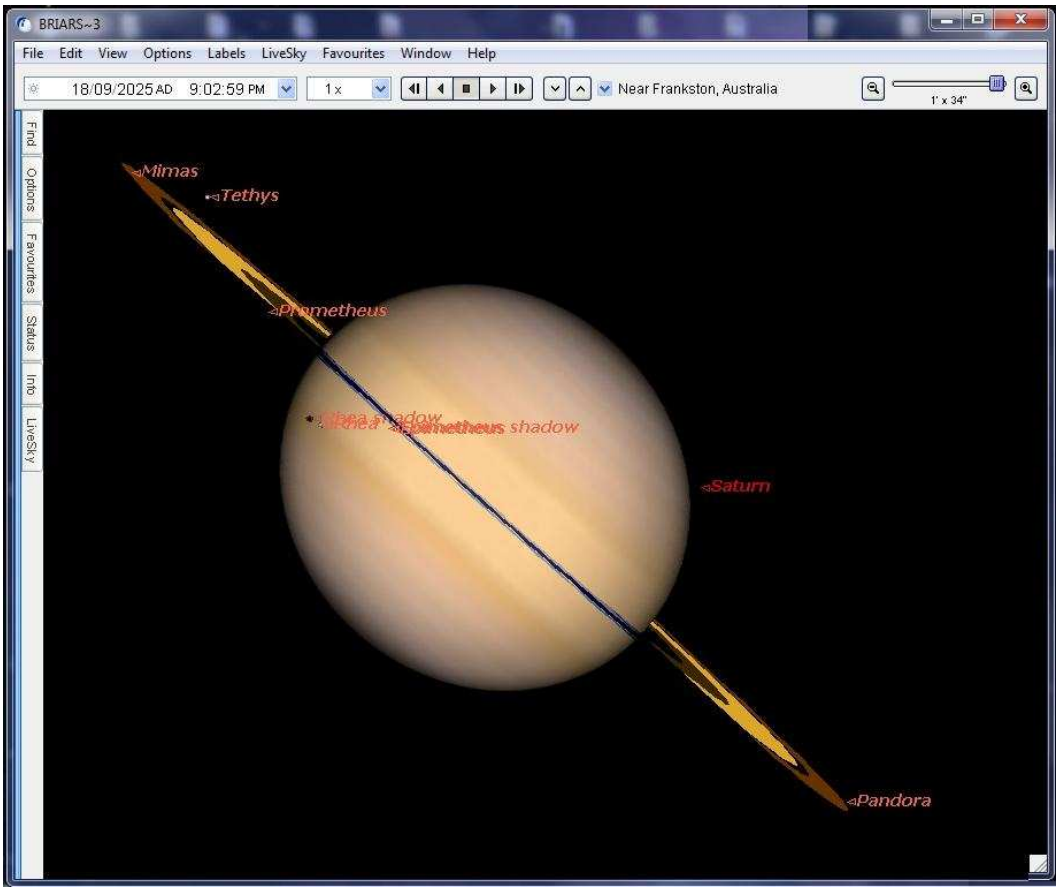
Neptune will look like a star with a slight blue colour. As an added challenge, see if you can spot Neptune's brightest moon Triton, which will be just below.



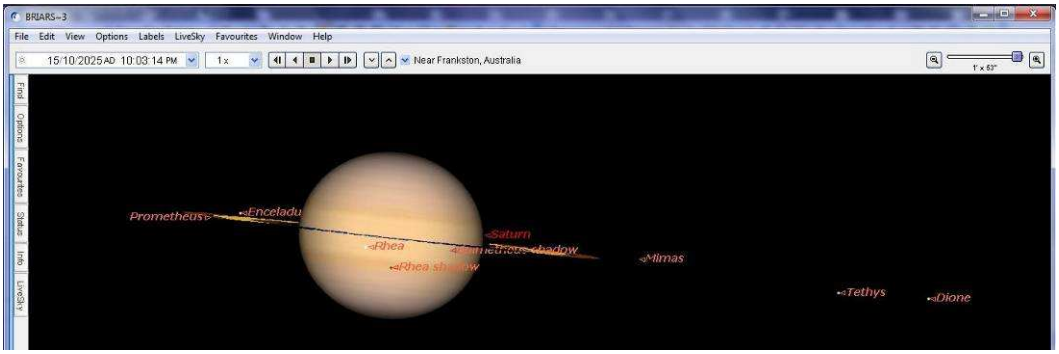


Saturn's rings are still almost as edge-on as they were this time last year. This also means that Saturn's moons are in-line with the rings and this gives us an opportunity to glimpse a shadow transit.

It so happens at 9 pm on the 18th of September that Saturn's 2nd brightest moon Rhea will be passing in front of Saturn which should cast a shadow on Saturn. Viewing this little black dot won't be easy. Saturn will be high enough above the horizon. We need high magnification with perfect seeing conditions. The 350mm Meade in the observatory should be up for the job and hopefully we have clear skies.



Second opportunity to see this rare event: Rhea shadow transit on the 15th October at 10 pm. Saturn will be even higher in the sky. So we could use the 11-inch Celestron in the small dome, which also gives excellent views of the planets. Also happens to be the night of the MPAS meeting.



As for the other planets in September. Uranus rises around mid night, while Jupiter doesn't rise till 4 am.

ASTRO NEWS

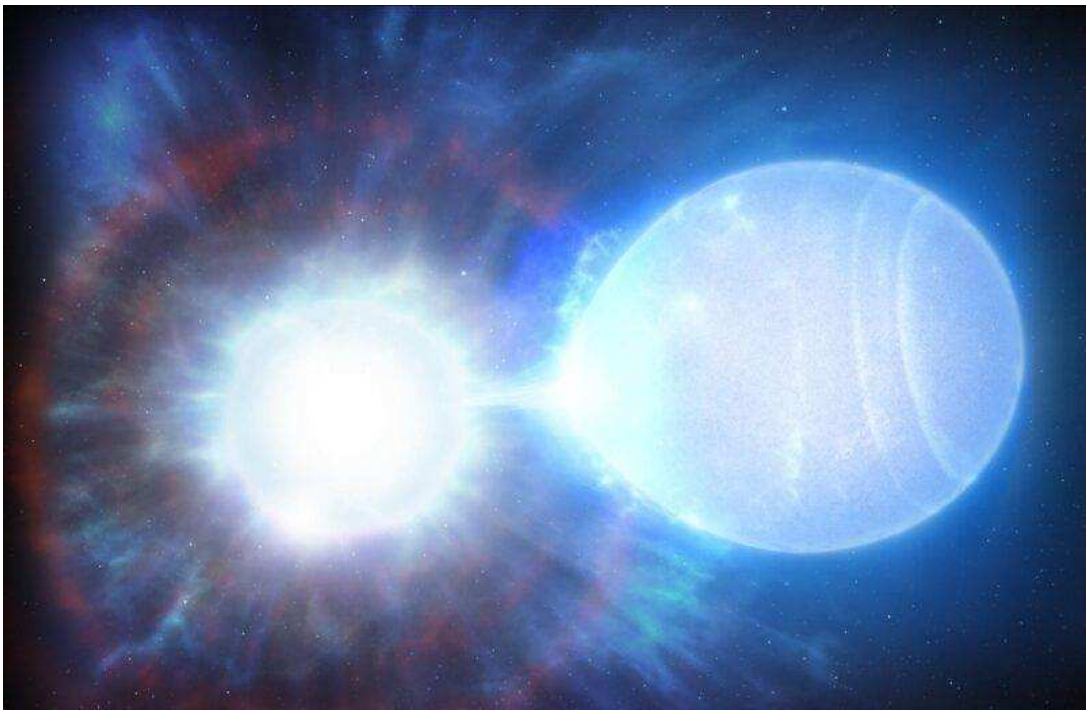
By Nerida Langcake

Mornington Peninsula Astronomical Society

Rare massive white dwarf was born when 2 stars collided

A white dwarf star is the dense core that remains after a star has exhausted all of its fuel and blows its gases out into space. But now, astronomers have found a white dwarf that's a little different. The researchers, led by the University of Warwick in the U.K., said that this white dwarf, 128 light-years away, formed from two stars merging. They were possibly a white dwarf and a subgiant star. The Hubble Space Telescope discovered carbon in the white dwarf's atmosphere, which provided clues to its origin. The white dwarf is also 1.2 times more massive than our sun, which is rare. The research team published the peer-reviewed details of their discovery in Nature Astronomy on August 6, 2025.

Hubble found the carbon when it observed the white dwarf in ultraviolet light. White dwarfs are common, but typically they're about half the mass of the sun and the size of Earth. The findings could mean that massive white dwarfs resulting from stellar collisions are more common than previously thought.



Astronomers at the University of Warwick also said they identified 2 nearbywhite dwarf stars that are on course to collide. The collision would create a supernova explosion in about 23 billion years. Image via University of Warwick/ Mark Garlick.

When Hubble observed the white dwarf – known as WD 0525+526 – it found small amounts of carbon in its atmosphere. This suggested that the white dwarf likely formed from the collision of two stars. And this could have been from the merger of a white dwarf and subgiant star. Usually, carbon is concealed by hydrogen and helium around the core of the white dwarf.
But when two stars collide, that hydrogen and helium barrier can be stripped away. As a result, the carbon from deeper down can now reach the white dwarf's atmosphere and be detected. As lead author Snehalata Sahu, Research Fellow at the University of Warwick, explained: In optical light (the kind of light we see with our eyes), WD 0525+526 looks like a heavy but otherwise ordinary white dwarf. However, through ultraviolet observations obtained with Hubble, we were able to detect faint carbon signatures that were not visible to optical telescopes.

Finding small amounts of carbon in the atmosphere is a telltale sign that this massive white dwarf is likely to be the remnant of a merger between two stars colliding. It also tells us there may be many more merger remnants like this masquerading as common pure-hydrogen atmosphere white dwarfs. Only ultraviolet observations would be able to reveal them to us.
The researchers needed Hubble's Cosmic Origins Spectrograph to be able to detect the carbon. Sahu said: Hubble's Cosmic Origins Spectrograph is the only instrument that can obtain the superb quality ultraviolet spectroscopy that was required to detect the carbon in the atmosphere of this white dwarf.

It is rare to find evidence of star mergers in single white dwarfs. As co-author Boris Gänsicke at Warwick noted: Finding clear evidence of mergers in individual white dwarfs is rare. But ultraviolet spectroscopy gives us the ability to detect these signs early, when the carbon is still invisible at optical wavelengths. Because the Earth's atmosphere blocks ultraviolet light, these observations must be carried out from space, and currently only Hubble can do this job.

YOUR ASTRO QUESTIONS

Does our galaxy turn? *By Greg Walton*

Yes, our Milky Way galaxy does turn once every 230 million years. Because of the long life of the Sun and Earth, we have completed about 20 orbits around the core of the Milky Way. Whereas larger stars with very short lives don't even make one orbit of the Milky Way, as they would have burnt through all they fuel in about 1 million years.

Galactic year or cosmic year. This is the time it takes for the Sun to make one orbit of the Milky Way, which takes 230 million Earth years. Our Sun is travelling at 828,000 kilometres per hour around the galaxy, that's about 1/1300 of the speed of light or 275 kilometres per second. It's a good thing that most of the stars are moving in the same direction. Colliding with anything at that speed would be catastrophic. Many of the other galaxies we look at in our telescopes are 50 million light years from Earth. By the time the light from these distant galaxies arrives at Earth, these galaxies would have only turned, if at a similar speed, less than 1/4 of one rotation or 90 degrees.

No two galaxies are the same. But it's true that all spiral galaxies do turn. If a spiral galaxy stopped turning, then all the stars would fall towards the central core where a massive black hole resides.

As a child I watched water go down a drain hole in a bathtub and was fascinated by the water spinning around faster and faster as the water got closer to the drain. You would think that the same thing is happening in the Southern Whirlpool Galaxy M83, where everything is moving towards the central black hole. The whirlpool (vortex) in the bathtub is generated by gravity dragging the water downwards. Whereas with a galaxy, because material is falling equally onto both sides of the Galactic plane (disk), this tends to cancel out the vortex effect. If more material fell onto one side of the disk, then a vortex can occur and the spiralling in effect can start. But this effect is very small, accruing over billions of years. This means that everything orbits a galaxy at about the same speed in the outer part of a spiral galaxy. Only near the very centre does the orbital speed of stars increase. Very much like our solar system where the inner planets orbiting at a much higher speed have avoided falling into the Sun.

Do all galaxies turn in the same direction?

If you were to view a galaxy from above and it is turning clockwise. Then if we viewed the same galaxy from below, the galaxy would be turning counter clockwise. So on average, half the galaxies should turn clockwise and the other half anticlockwise. However a recent study of galaxies viewed from Earth, has shown that about 1/3 of galaxies are turning clockwise and the other 2/3 anticlockwise. M83 rotates clockwise and M51 rotates anticlockwise.

If a small galaxy merges with a larger galaxy, then the disruption is small like what is happening with Whirlpool galaxy M51 NGC5194. But if two equal size galaxies merge then the spiralling arms can be totally disrupted creating irregular or elliptical galaxy. Also it would depend on the direction of spin. If two clockwise galaxies merged, then you would think that the disruption would be far less.

Unfortunately our Milky Way rotates in a clockwise direction, while the Andromeda Galaxy rotates in a counter clockwise direction. In 4.5 billion years, when these galaxies come together it will be a total train wreck.

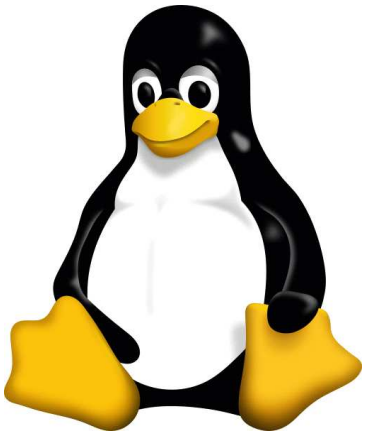
How do astronomers measure the rotation of a galaxy?

If we photograph an edge-on Spiral Galaxies like the Andromeda Galaxy M31, the stars on one side are slightly red shifted whereas the stars on the other side are blue shifted. The red shifted stars are moving away from us whereas the blue shifted stars are moving towards us. This proves that the Andromeda Galaxy is turning in a counter clockwise direction.

Southern Whirlpool Galaxy M83 imaged *by Greg Walton*
12 inch Newtonian 55x30 sec LMDSS 10/4/2013

Whirlpool Galaxy M51 imaged *by Greg Walton*
8 inch newtonian 158x30 sec LMDSS 20&27/4/2012

Andromeda Galaxy M31 imaged *by Greg Walton*
80mm refractor 108x30 sec Yea 30/8/2019



Windows 10 is about to reach end of life. If your PC isn't new, it won't be upgradeable to Windows 11. Save money, prevent e-waste, and make your old PC faster than ever!

Microsoft is officially ending support for Windows 10 on 14 October 2025. This means no more security updates, and with no updates, your PC will quickly become risky to use when connected to the internet. If you have a newish PC, you can likely upgrade to Windows 11 without trouble. For the rest of us, Microsoft wants you to pay for extended support or buy a shiny new PC. An estimated 240 million PCs are going to contribute to e-waste from this change.

This may not be necessary – there is a better way! Linux!

Linux Fast Facts

Launched in 1991 with open-source principles, user freedom, and community-driven development.
Lightweight, fast, and avoids bloatware, telemetry, and spyware.
Free (as in freedom and cost) with no licenses, forced updates, or hidden fees.
Highly customizable, offering full control over your desktop experience.
No built-in spyware and is used by the top 500+ supercomputers.
Supports astrophotography software and provides security updates for older hardware.

I've got an old laptop that is unable to upgrade to Windows 11, so in preparation, I've switched it over to Linux.

GUIDE – HOW TO PREPARE AND INSTALL LINUX

Step 1 (optional) – Identify if you are using Windows 10
Press Win + R, type winver, and press Enter. This will open a window showing the Windows version and build number.

Step 2 (optional) – Check if your PC is supported by Windows 11
Download the PC Health Check app from the following website: https://www.microsoft.com/en-au/windows/windows-11#pchealthcheck . It will tell you if your hardware is supported.

Step 3 – Back up your data
This guide will be a clean install – save any files you want on a spare USB or external hard drive. (Note: It may be possible to maintain data and copy it over if you have enough storage, but this is outside the scope of this guide.)

Step 4 – Download and install Ventoy on a blank USB (everything will be erased off the USB)
https://www.ventoy.net/en/download.html
Download the installation package, such as ventoy-x.x.xx-windows.zip, and decompress it. (Note: It redirects to the SourceForge webpage for download.)
Run Ventoy2Disk.exe, select the device, and click Install or Update.

Step 5 – Download Linux distributions (ISO) files and save them to the Ventoy USB
Below, I've recommended some Linux distros to try – I recommend Kubuntu for new users, but you can actually try all of these on the USB without installing them on your PC.

Kubuntu https://kubuntu.org/getkubuntu/
Ubuntu https://ubuntu.com/download
Linux Mint https://www.linuxmint.com/download.php
Endeavour OS (advanced users) https://endeavouros.com/

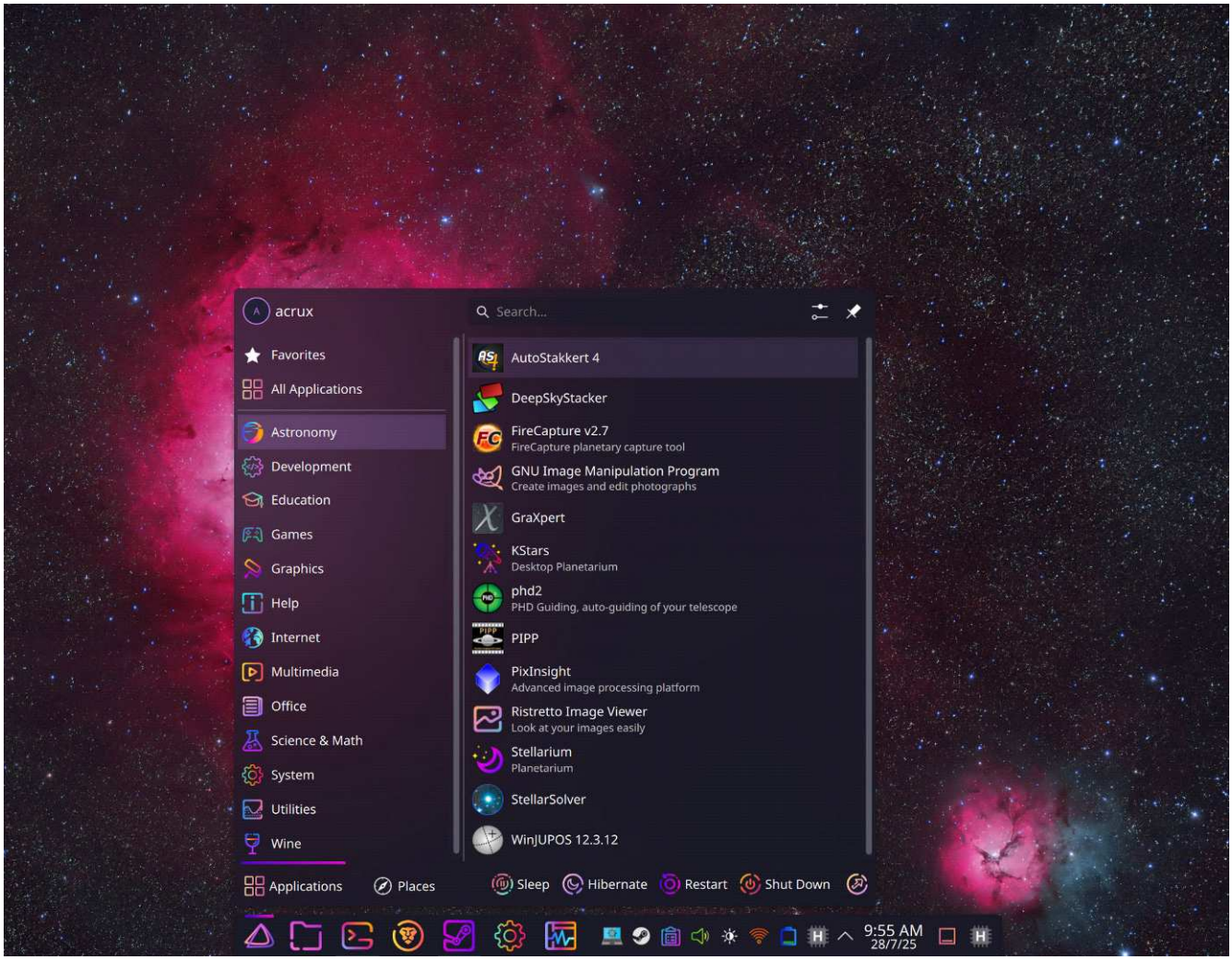
Step 6 – Disable BitLocker (if necessary)
Go to Settings > Update & Security > BitLocker (Windows 10/11) and disable it (or back up key).

Step 7 – Prepare for installation
From inside Windows: Open Settings: Press the Windows key + I - Go to Recovery: Click "Update & Security", then "Recovery" - Advanced Startup: Under "Advanced startup", click "Restart now" Choose an option: After restart, select "Troubleshoot" Advanced options: Select "Advanced options" UEFI Firmware Settings: Select "UEFI Firmware Settings". (If you don't see this, look for "Firmware Settings" instead.) Restart: Click "Restart" to enter the BIOS.

Step 8 – Bios Settings change
1. Boot Order: Find the "Boot Order" or "Boot Priority" settings.
2. Move USB to Top: Set your Ventoy USB drive as the first boot device.
3. Disable Secure Boot: If Ventoy doesn't boot, disable Secure Boot in the BIOS settings.
4. Disable TPM (Trusted Platform Module).
5. Save & Exit: Save the changes and restart. Your PC should now restart and boot into Ventoy. Try the linux distro's you've downloaded into Ventoy!

Step 9 – Install Linux
Once you've decided on which Linux to use, install the operating system from within the live environment.

Screenshot of Endeavour OS and Astronomy software installed



Performance Results – Just how much faster is Linux?
I decided to run the PixInsight benchmark – a tool designed to emulate heavy astrophotography image processing.

Run (each run best of 3)	OS and settings	Total time to complete and overall Score
1	Windows 10 – default settings	119 seconds - 3951
2	Windows 10 – 8x swap folders	82 seconds - 5728
3	Kubuntu 25.04 – default settings	61 seconds - 7694
4	Kubuntu 25.04 – 8x swap folders	70 seconds - 6718

Wow, look at that – with default settings, it was nearly twice as fast. I guess we should be thanking Microsoft for not supporting Windows 10 after all – what a great performance uplift, thanks Gatesy!

Astrophotography Software
It's possible to run some Windows-only programs by using Wine to install them.

Final Note:

If this all sounded like mumbo-jumbo but you want to make the switch reach out - if there is enough interest, I will make myself available to provide assistance to members at the Briars in advance of 14 October 2025 and if anyone else is Linux-savy also let us know if you're willing to lend a hand. Please send an email to the group and let us know!

Regards Russell Smith

MEMBERS GALLERY

NGC6165 The Dragon's Egg

Part of the Fighting dragons or Ara Nebula.

7x600 secs

Optolong L-Ultimate filter

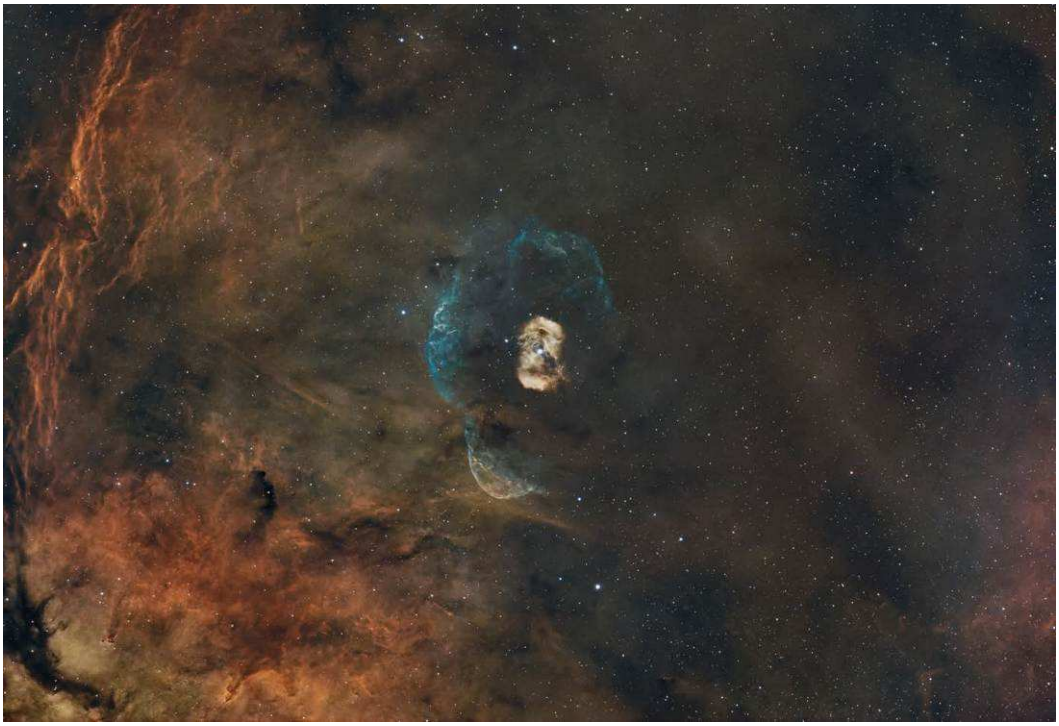
TS-Optics 130 APO with 0.75 reducer 675mm field of view

ZWO 294 MC Pro

ASIAIR

Stacked in APP processed in HOO using PixInsight.

By Nik Axaris



Right -

Startrails image from Camp Nillahcootie – Night two.

By Jamie Pole

Below -

2 panel Photoshop stitch-up using my Canon700D.

10-20mm Sigma @ 10mm f/3.5 30 sec ISO-3200.

Some denoising, colour balancing, and brightness and contrast adjustment in Photoshop.

By Chris Kostokanellis

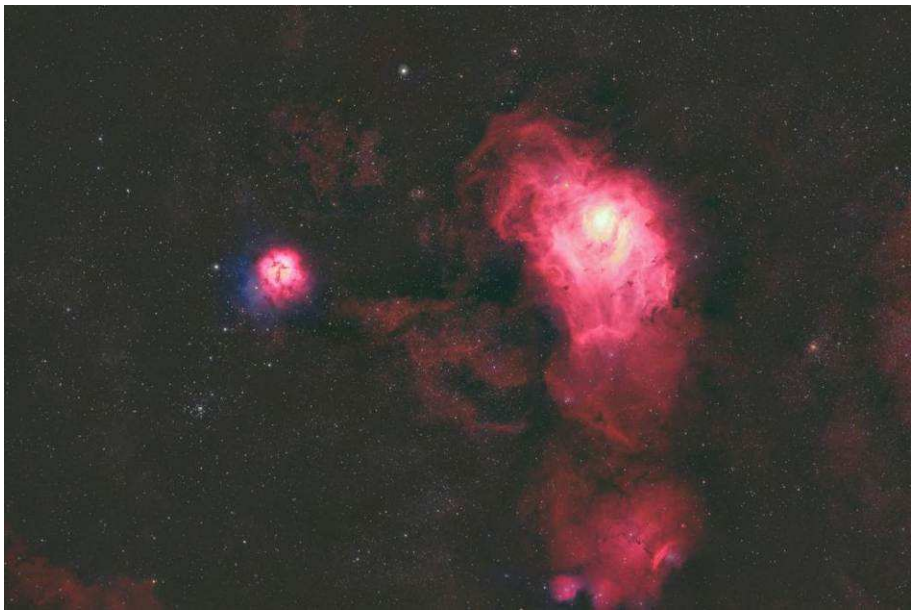
Right -

M20 Region

Nillahcootie Star Party - 28th June (Night 2)
6 Hours of LRGB & Ha Data processed in PixInsight.

William Optics Star 71 Telescope, 2600mm Duo camera.

By Dave Rolfe



Right -

Cats Paw & Lobster Nebula

Nillahcootie Star Party – 27/28th June
6 Hours of LRGB & Ha Data processed in PixInsight.

William Optics Star 71 Telescope, 2600mm Duo camera.

By Dave Rolfe

Below -

M8 LAGOON NEBULA – SEESTAR MOSAIC

By Sylvie Grandit

The Moon Imaged the 10th July 2025, *By Liam Laube*

Telescope - Meade @ Briars MPAS Camera - Canon 6D - 19 frames - 1/40 seconds @ ISO100

A few artifacts from complicated stacking process. Two noticeable colours other than standard grey to amber colours.

The image was difficult to keep in the full frame, and constant adjustments made.

As focus had been dialled in, twist and focal length are not consistent.
I have 240 RAWs, in needing of alignment—rotation, scaling and x, y drift shifts.

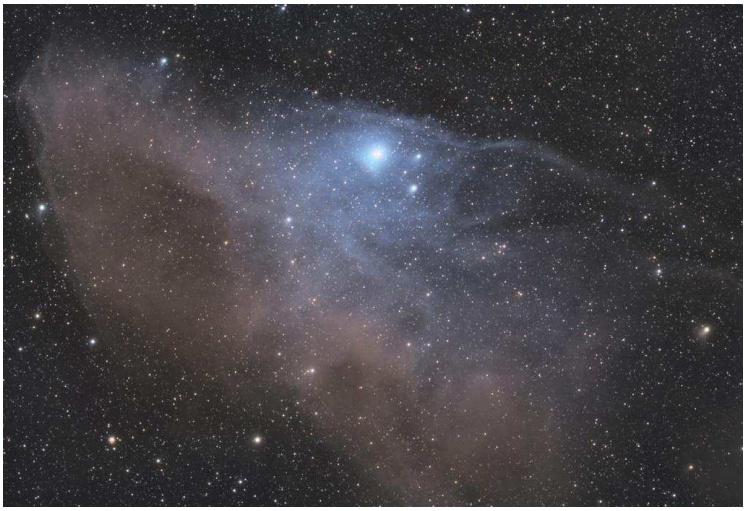
Right -

Moon

Hi all. First time posting in a while. Got the 8" Dob out Friday night and took my first photo in a long time. Was well worth it. Didn't spend too long outside and couldn't remember all the best techniques etc. and took me multiple attempts to stack them correctly. But I'm happy with it, considering how little effort I had to put in. Any constructive feedback would be appreciated.

By Conner Anthony Mathieson

Right - cover image

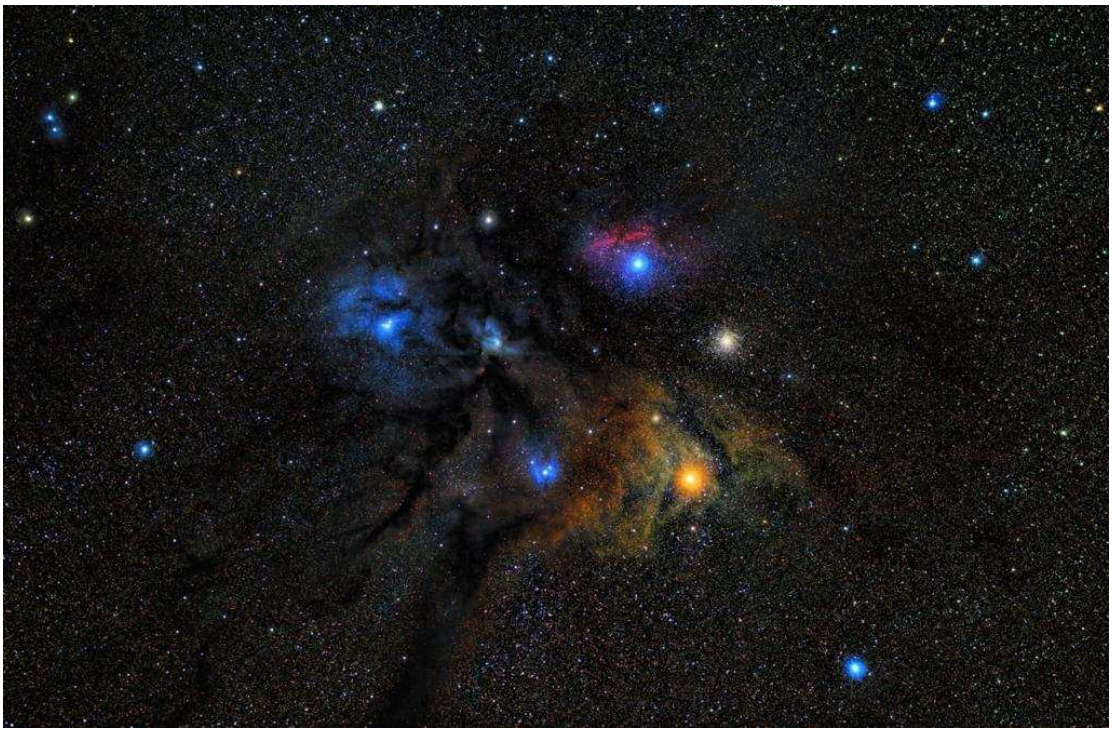


Imaged on Friday night from the dark skies of Lake Nillahcootie, this is IC 4592 – the Blue Horsehead. It's a reflection nebula in Scorpius around 420 light years away.

37 x 2 min.
80mm Refractor with 0.8 Flattener/Reducer (400mm FL)
UVIR Filter.
ASI 294MC Pro.
DSS and Siril for processing.

By Chris Kostokanellis

Right -



The Rho Ophiuchi cloud complex
I dusted off my old cooled ASI camera (ZWO 071) and attached a new135mm Rokinon lens while in Horsham over the weekend. While there was cloud interference and some light pollution the one hour of stacked images came up looking great!
Rho Ophiuchi cloud is a complex of interstellar clouds with different nebulae, particularly a dark nebula which is centred 1° south of the star ρ Ophiuchi. At an estimated distance of about 460 light years, it is one of the closest star-forming regions to the Solar System.

By Dominic Lucarelli

Right -

My image of NGC 6188 Dragons of Ara, taken with my Seestar. 132 images, stacked, denoised; and I have played a little with the colours.

By Mark Stephens

Far right -

Same photo as yesterday but with a little more tampering.

By Mark Stephens

MO PHO CHALLENGE

Chris Kostokanellis

Mornington Peninsula Astronomical Society

Astro Mo Pho #26 - MPAS vs Hubble and JWST.

Our last Astro Mo Pho Challenge asked members to compare their photos with those of the great space telescopes, Hubble and JWST. The inspiration for this challenge was “Hubble’s Night Sky Challenge”, run by NASA.

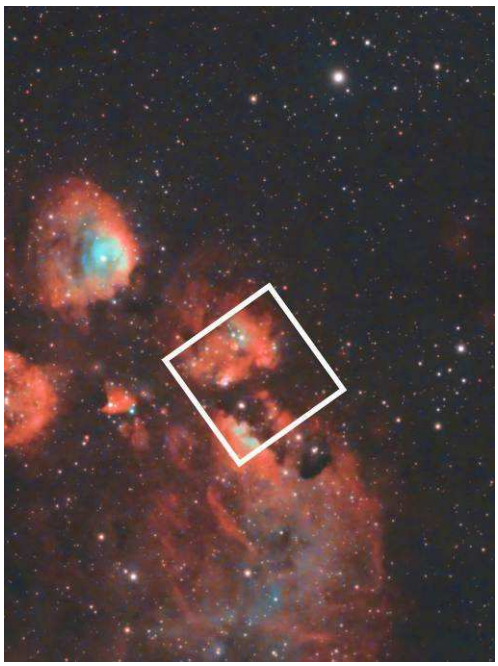
Many of the details in Hubble and JWST photos can be identified in our own photos, and it’s fun to compare.
The Hubble Space Telescope (HST) has a very narrow field of view compared to most consumer level telescopes.
In fact, the field of view of the Wide Field Camera 3 (WFC3) used to image many of the objects in our challenge, has a field of view of only 2.7 x 2.7 arc minutes. That’s around only 8% of the width of the full moon.
For comparison, a 200 mm f5 Newtonian with a full frame camera attached has a field of 4^{o} 7.1' x 2^{o} 45'. This is 5 times larger than the full moon, allowing it to capture the incredible detail we see in its photos.

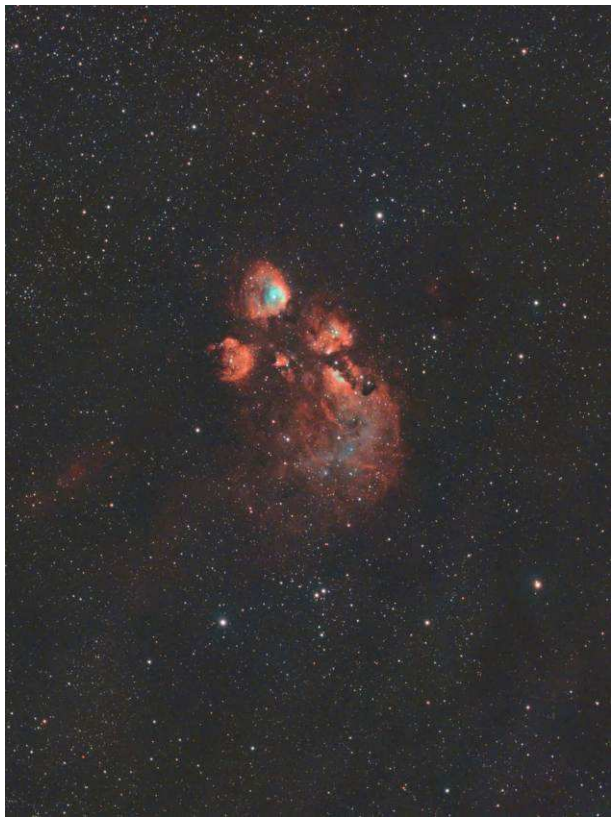
Members who completed the Hubble challenge are: Steven Mohr, Fred Prata, Greg Walton, Nik Axaris, Russell Smith, Steve Wilkins, David Rolfe, Dennis Cooke, Domenic Lucarelli, Mark Stephens, Michael Barrow, Neville Drake, Sylvie Grandit.

Astro Mo Pho.
Here’s another comparison for you.
The page linked below also includes a video zooming into the Cat’s Paw to show the actual region.

https://webbtelescope.org/contents/news-releases/2025/news-2025-129

By Chris Kostokanellis





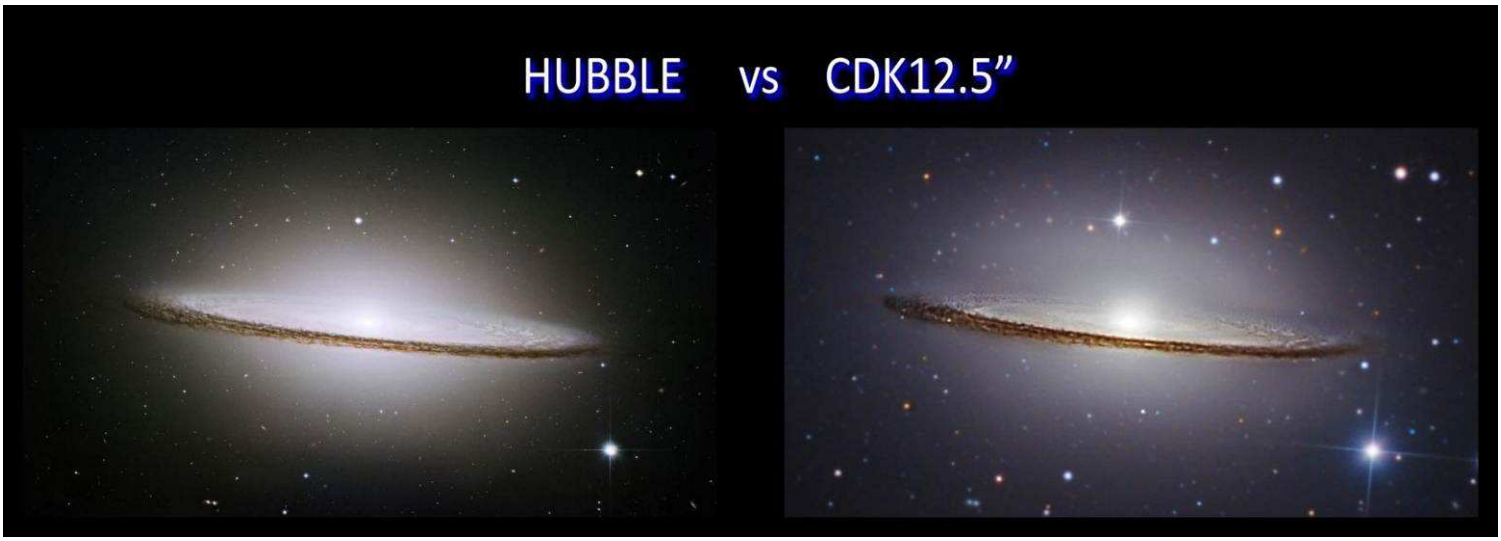
Right -

Astro Mo Pho. Me vs JWST.
This is the Cosmic Cliffs in the Gabriella Mistral Nebula, part of the Carina Nebula.
My image is a crop of a photo taken with my 200mm f5 Newtonian.
This was only 36 minutes of imaging.

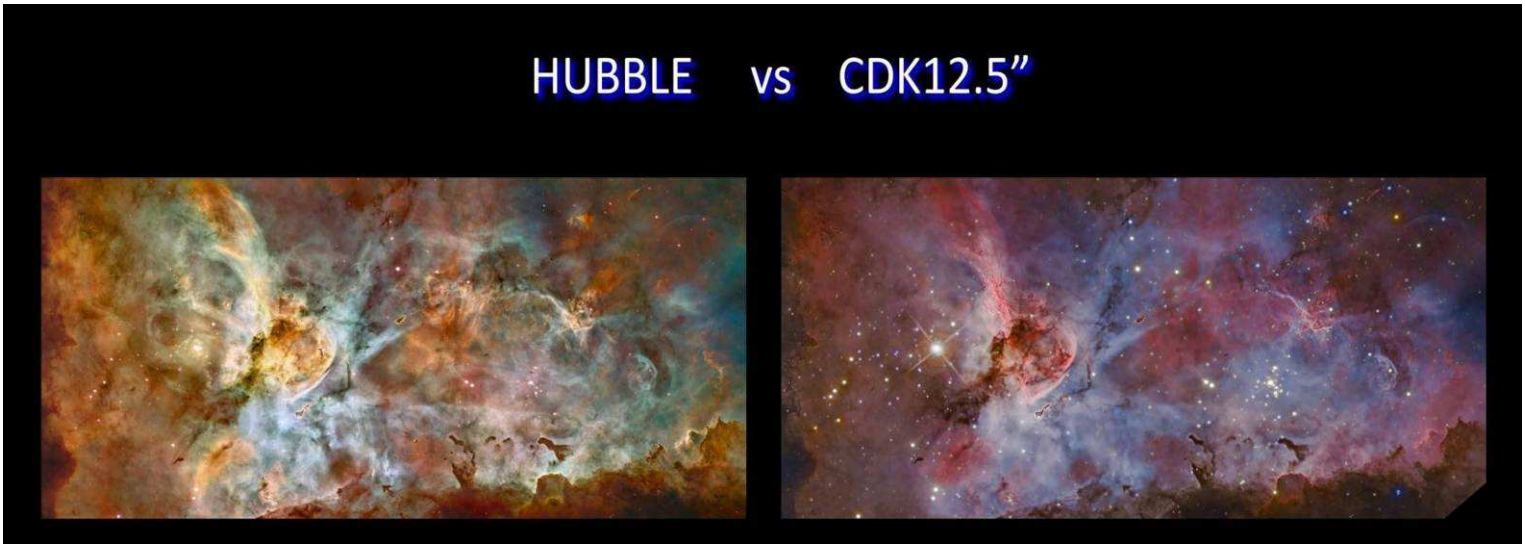
By Chris Kostokanellis

I like this Hubble comparison Mo Pho challenge! I am going to put a few together, and dust off some cobwebs from the digital library. This one is M104, a small galaxy that looks simply awesome in photos and to the visual eye. *Steve Mohr*

Below - Image comparison taken with the Planewave CDK 12.5. *By Steve Mohr*

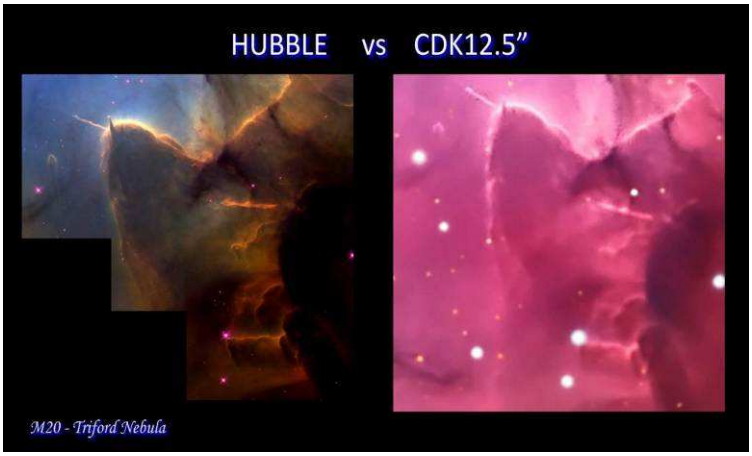


Below - NGC3372 Hubble vs Planewave CDK 12.5 inch, *By Steve Mohr*



Far right - NGC3324 *by Steve Mohr*

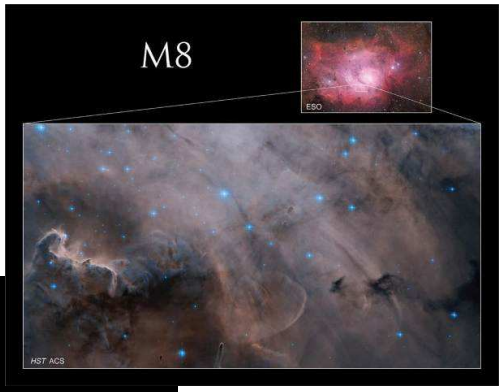
Below - M20 *by Steve Mohr*



Below - M16 Eagle - So many beautiful images from Hubble, it's definitely fun to make our own renditions. *By Steve Mohr*

Right & Below -

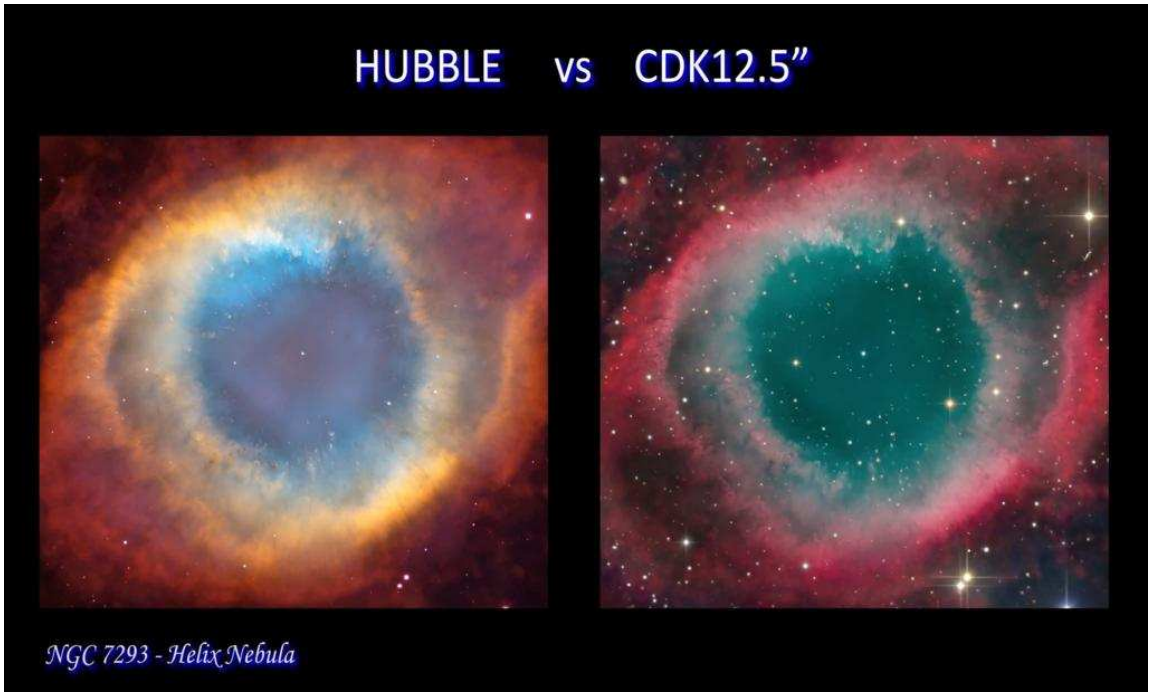
M8 Lagoon Nebula Hubble vs Planewave CDK 12.5 inch. *By Steve Mohr*



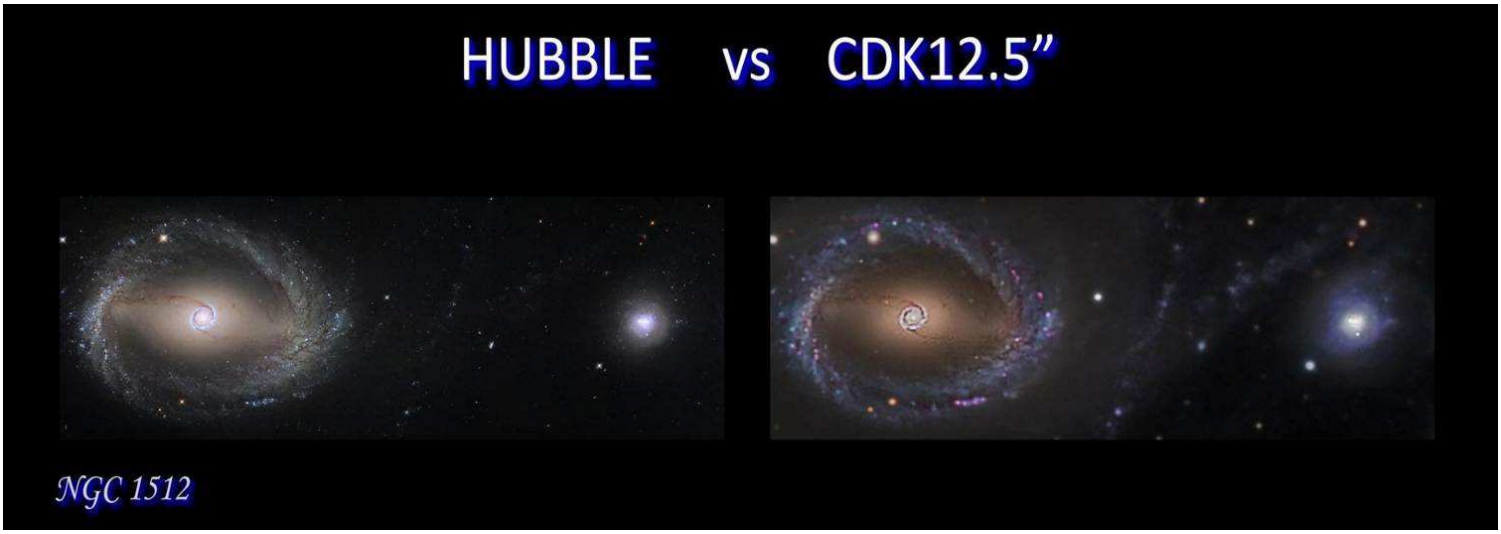
Right -

Hubble doing narrowband looks quite different to normal broadband, and this Helix Nebula is compared to an LRGBHa, using the Ha to collect detail in the Narrowband area. This was a super difficult object to process, and you could just keep tweaking it to change displayed colours. I love the fine details you can capture with a small telescope.

By Steve Mohr



Below - NGC1512 HUBBLE vs Planewave CDK 12.5 inch. *By Steve Mohr*

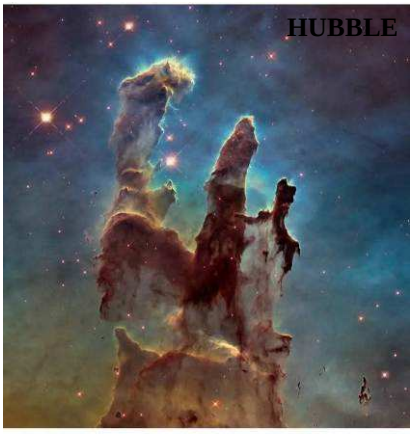


Right -

Astro Mo Pho

My version of M16

By Nik Axaris



NASA, ESA and the Hubble Heritage Team (STScI/AURA)

Right -

M 20 (Trifid nebula). First time in 2 months, clear skies and me being free occurred together. Taken with a Seestar S50, edited with Siril. Only got 9 1min frames but I was just so glad to get anything. There’s no doubt I need to work on my editing but I think on a $ basis we are all ahead of NASA given what they spend.

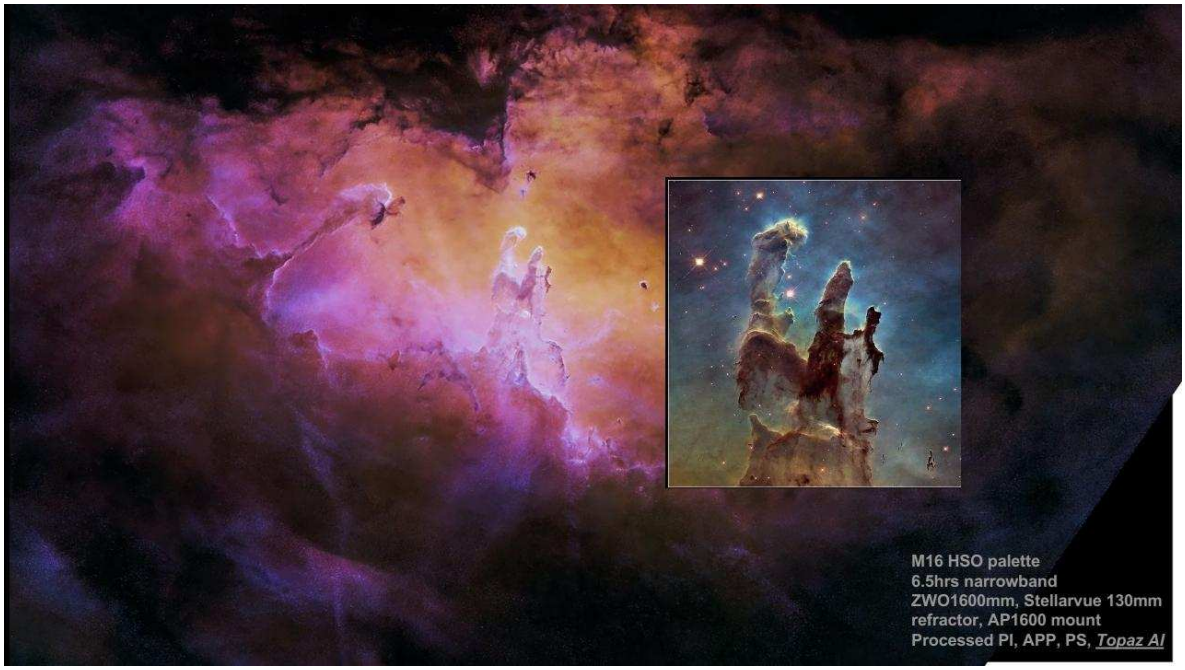
Clear Skies everyone. Michael Barrow

Right -

Astro Mo Pho M16.

I've been battling a series of tech issues (and clouds, like everyone else!), so I chose the obvious target and luckily the deadline was extended.

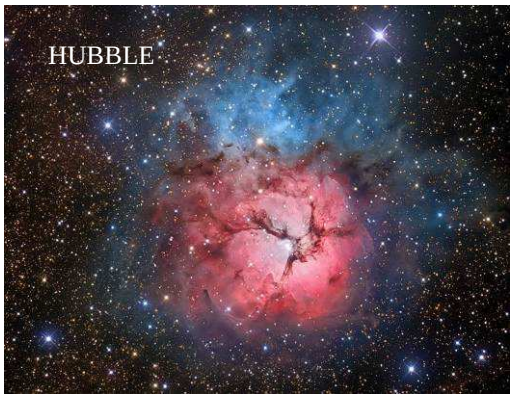
By Steve Wilkins



Right -

Astro Mo Pho challenge, Carina Nebula, my effort vs Hubble's.

By Mark Stephens



Left -

Correcting my earlier 'cluster muck' here is my Mo Pho submission of the Triffid Nebula taken with my Seestar S50, alongside NASA's which contained a bit more blue than mine.

By Mark Stephens

Right -

Pillars of Creation M16 by Hubble vs M16 imaged with the 350mm Meade in the MPAS observatory.

I edited my image to best resemble the Hubble image.

By Greg Walton

M16 by Hubble

NASA, ESA and the Hubble Heritage Team (STScI/AURA)

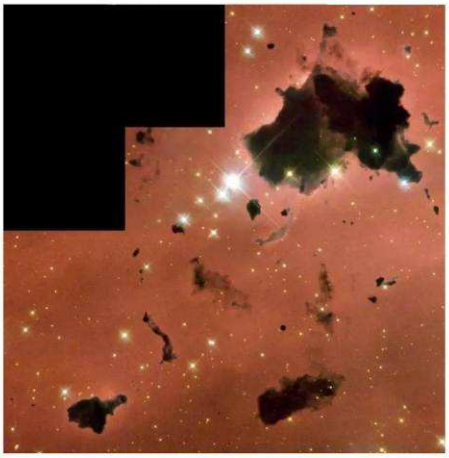
M16 imaged with 350mm Meade
By Greg Walton

Right -

Small area within the Running Chicken Nebula C100 by Hubble vs C100 imaged with a 12 inch Newtonian.

I edited my image to best resemble the Hubble image.

By Greg Walton



NASA and the Hubble Heritage Team (STScI/AURA);
Acknowledgment: Bo Reipurth (University of Hawaii)

C100 imaged with 12 inch Newtonian by G Walton

Below -

Collection of my images vs Hubble's.

By Greg Walton

C53

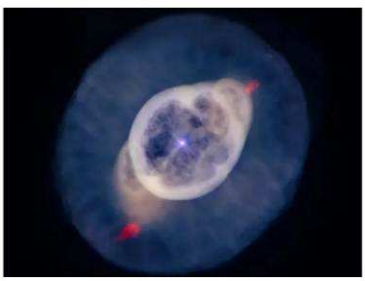
Object Type: Lenticular Galaxy
Difficulty: 2

C53 imaged with 8 inch Newtonian
By Greg Walton

C32: Whale Galaxy

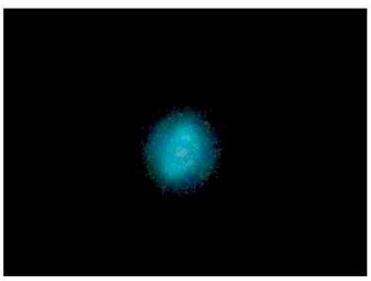
Object Type: Spiral Galaxy
Difficulty: 2

C32 imaged with 8 inch Newtonian
By Greg Walton



C59: Ghost of Jupiter

Object Type: Planetary Nebula
Difficulty: 2



C59 imaged with 8 inch Newtonian
By Greg Walton

C46: Hubble's Variable Nebula

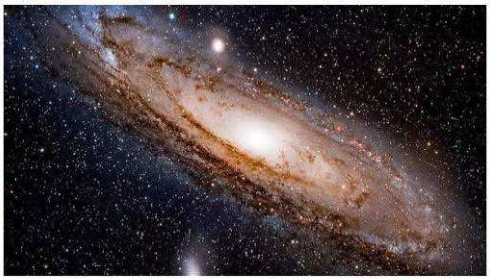
Object Type: Nebula
Difficulty: 3

C46 imaged with 8 inch Newtonian
By Greg Walton

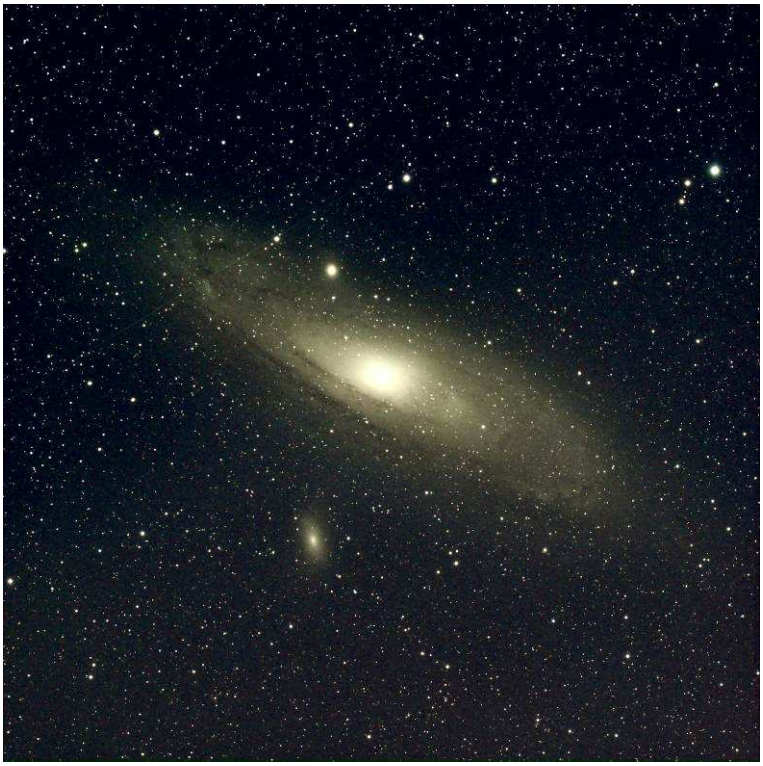
Right -

Hubble vs Redcat51 – Andromeda

By Sylvie Grandit



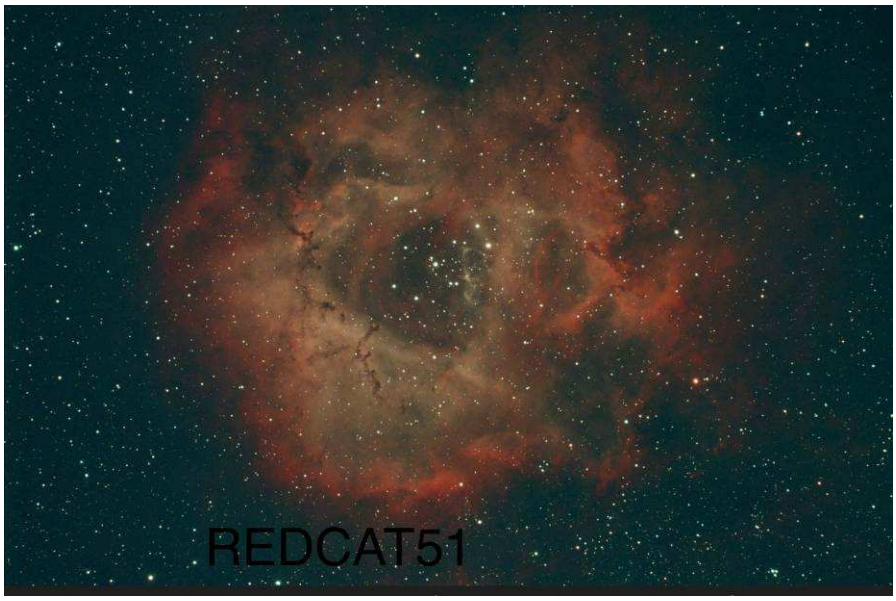
New Hubble observations reveal that Andromeda's satellite galaxies evolved differently from the Milky Way's, challenging long-held theories about galaxy formation. (CREDIT: NASA)



Below -

Rosetta Nebula /open cluster NGC2244

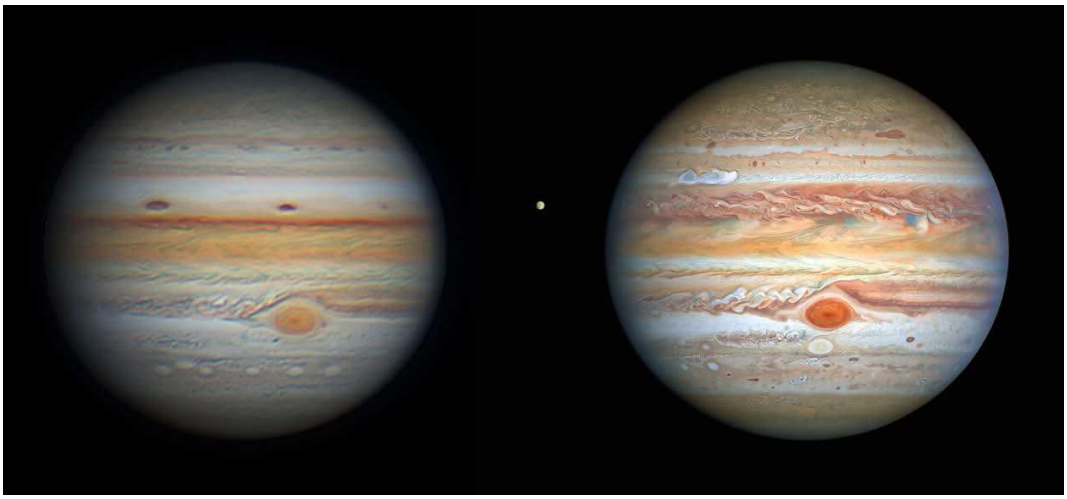
By Sylvie Grandit



Below - Astro Mo Pho Challenge. Here's a picture of Jupiter taken by me back in Oct 2021 under excellent seeing with my C14 and RGB mono camera. It's compared to a picture taken by the NASA/ESA Hubble Space Telescope on 25 August 2020. Hubble's sharp view is giving a weather report on the monster planet's turbulent atmosphere, including a remarkable new storm brewing, and a cousin of the Great Red Spot. The image also features Jupiter's icy moon Europa.

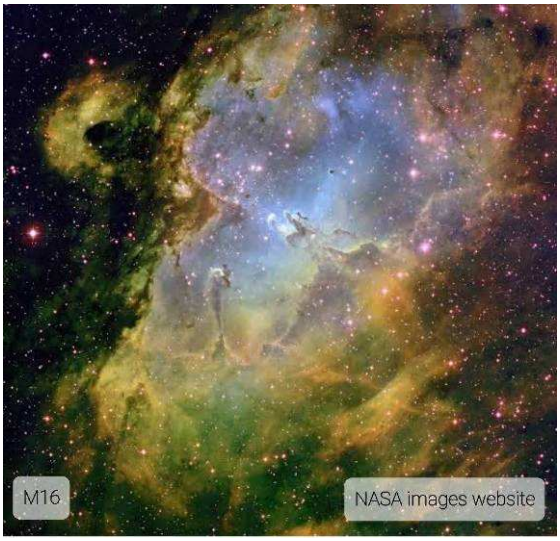
My shot taken more than a year later, show how the cloud pattens can change after just a year. I gotta say, the Hubble image looks amazing and would beat anything taken by the voyager spacecrafts that flew close by the planet in the 1979!

By Dominic Lucarelli



Below - On a clear night like last night who could resist a couple of starry night shots. It simply amazes me what's up there in areas that look blank to the naked eye (especially in Patterson Lakes). One image is of Messier 8 (M8) the Lagoon Nebula, and the other is Messier 16 (M16) The Eagle Nebula. Both images are of 2 hrs of 20 second exposures stacked by my S20. I hope they are getting better, learning, learning, learning.

By Dennis Cooke



Right -

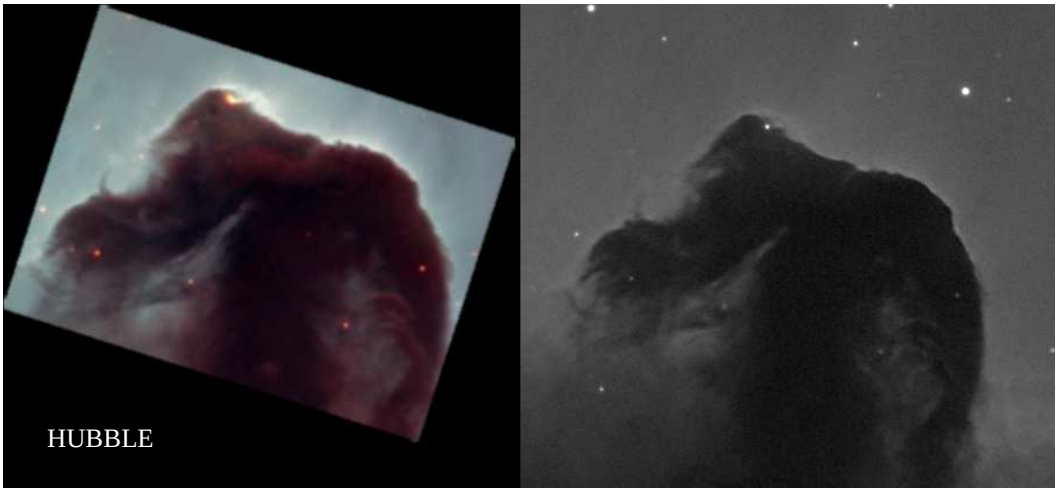
Well last night was clear enough to get 2 hours of 30 second frames of NGC6357 the Lobster Nebula with my Seestar S50, I de-noised it and mucked with the sliders. Looks ok to me. By comparison I have included a Hubble image which I rotated and trimmed to similar proportions. Looking forward to seeing the other entries.

Regards Dennis Cooke

Above -

Pillars of Creation M16

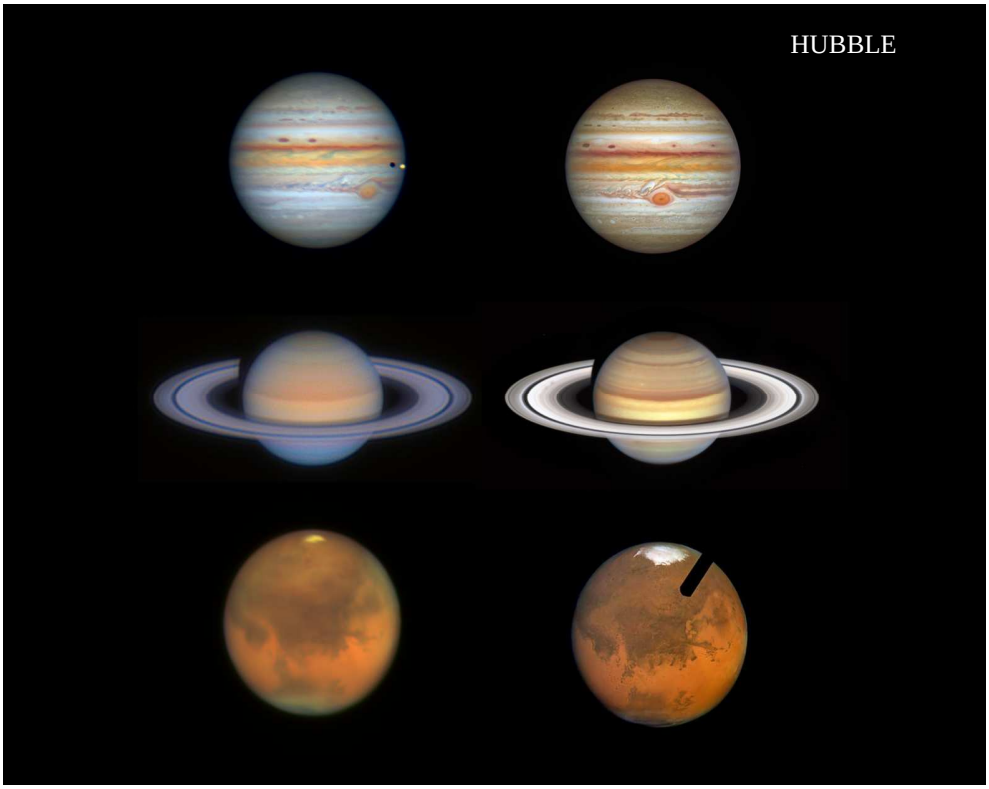
By *Russell Smith*



Left -

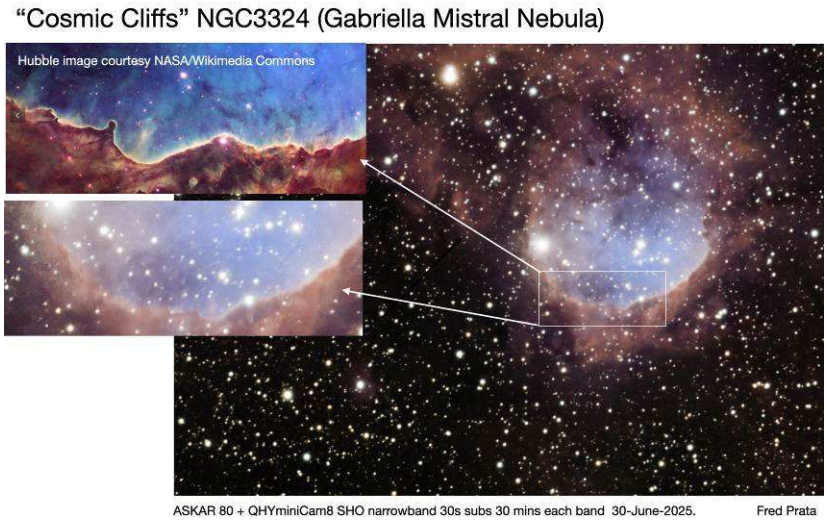
Barnard 33. The Horsehead Nebula.

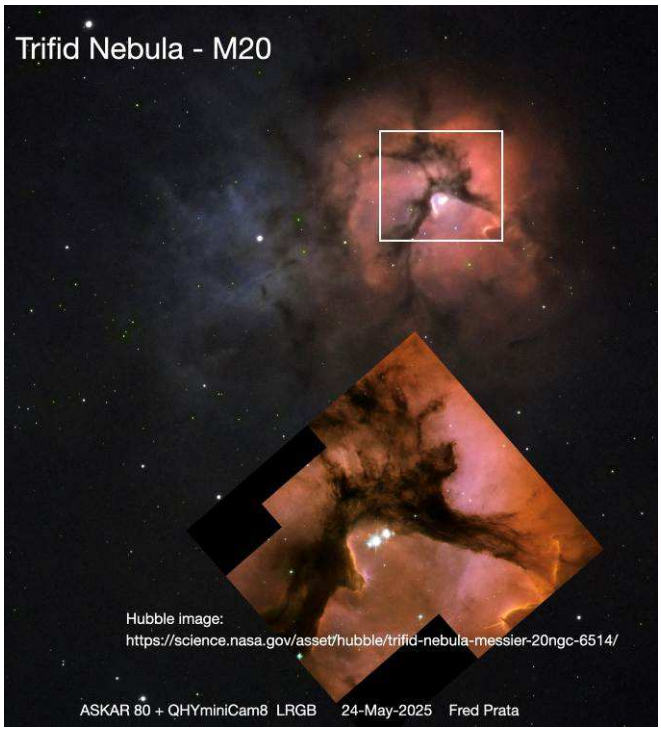
By Hubble Telescope (Left)
By Russell Smith (Right)

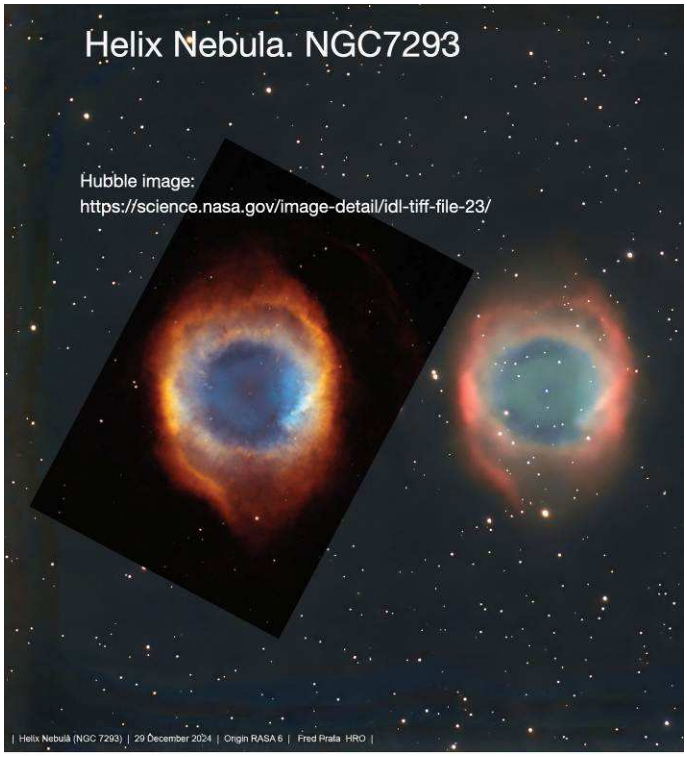


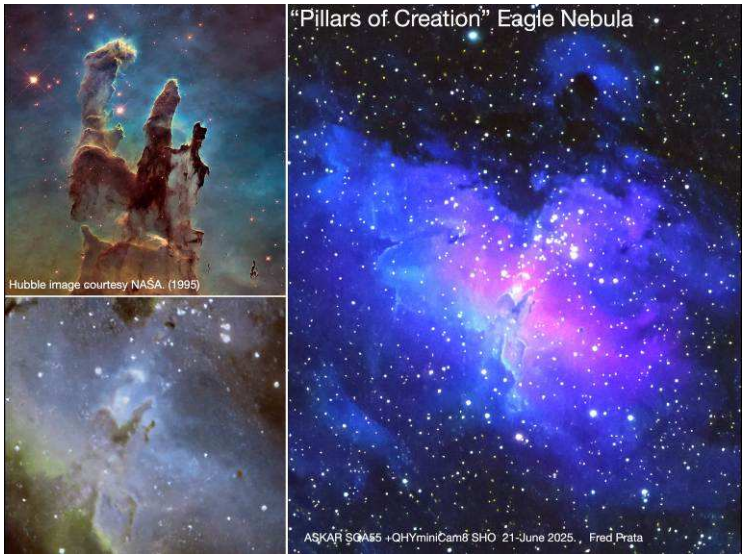
Above. Russel Smith vs Hubble: Planets.
Photos by Russel Smith (Left)
Photos by Hubble Telescope (Right)

Below 4 images - Hubble Challenge Images. *By Fred Prata*









Right -

Astro Mo Pho challenge. My M16 vs Hubble.

Vespera2, 4 hours of 10 second exposures.
CLS filter.

Box Hill spa deck observatory.

Atrocious editing on the iPhone

By Neville Drake

Right -

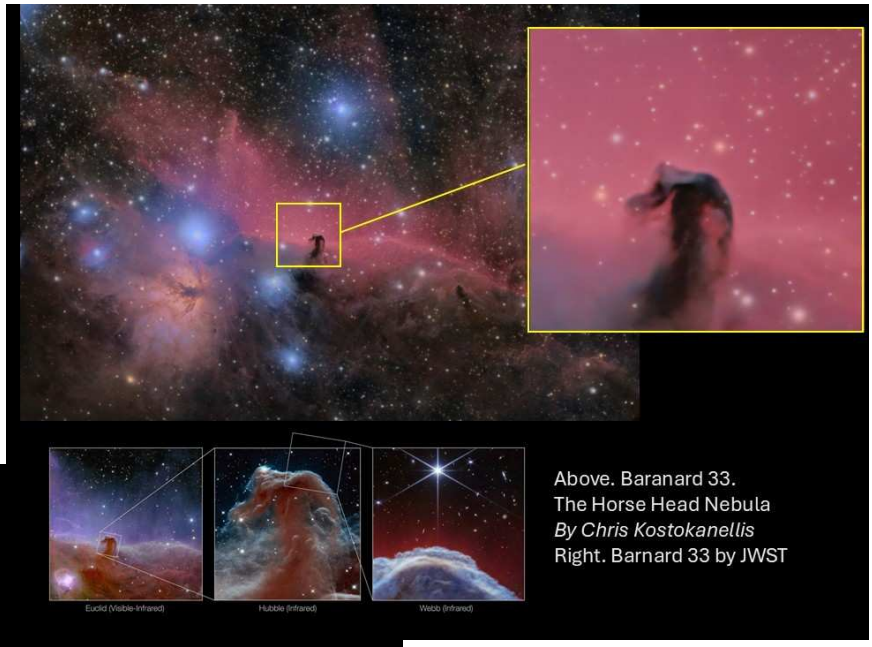
Barnard 33 The Horsehead Nebula

By *Chris Kostokanellis*

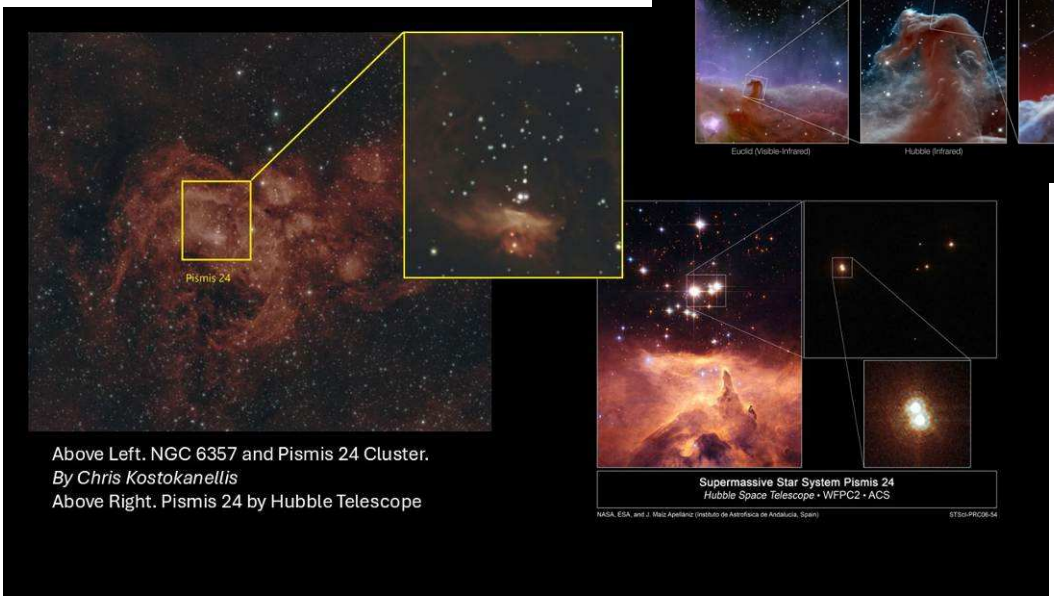
Below -

NGC6357

By *Chris Kostokanellis*



Above. Baranard 33.
The Horse Head Nebula
By Chris Kostokanellis
Right. Barnard 33 by JWST



Above Left. NGC 6357 and Pismis 24 Cluster.
By Chris Kostokanellis
Above Right. Pismis 24 by Hubble Telescope

Our next Mo Pho Challenge sees the continuation of the Hubble Challenge, but only new data is allowed.
Members are also challenged to capture the upcoming Lunar Eclipse, and to use their smartphones for Astrophotography.
Using a smartphone to capture the eclipse or a Hubble object using eyepiece projection will result in 2 challenge completions.

Clear skies. *Chris Kostokanellis*

SOCIETY INFORMATION


Peter Skilton


Chris Kostokanellis


Nerida Langcake

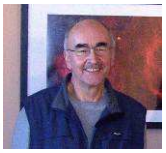

Jamie Pole


Trevor Hand


Guido Tack


Simon Hamm


Phil Peters


Manfred Berger


Greg Walton

OFFICE BEARERS OF THE MORNINGTON PENINSULA ASTRONOMICAL SOCIETY

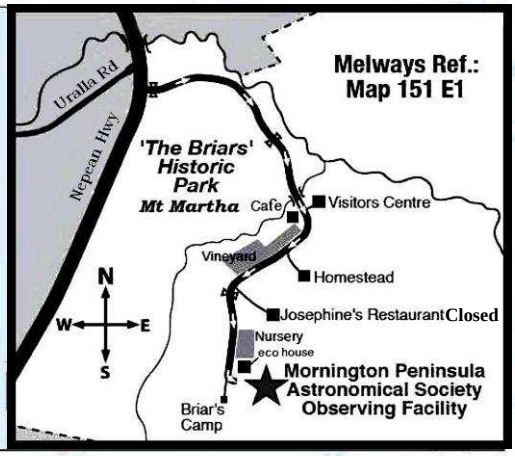
President: Peter Skilton
Vice President: Chris Kostokanellis
Committee: Trevor Hand, Guido Tack, Simon Hamm, Phil Peters and Manfred Berger
Secretary: Nerida Langcake
Treasurer: Jamie Pole
Web master: Guido Tack
Scorpius editor: Greg Walton
Site manager: Phil Peters

SOCIETY MEETINGS

Meeting Venue: MPAS Astronomy Centre
The Briars, 450 Nepean Hwy, Mt Martha
(Melways ref. 151/E1)
Society meetings: Don Leggett Astronomy Centre
8pm on the third Wednesday of the month
(*except December*)
(See map at right & Below)

For addition details:
Internet: www.mpas.asn.au
email: welcome@mpas.asn.au

Phone: 0419 253 252
Mail: Mornington Peninsula Astronomical Society
450 Nepean Hwy, Mount Martha, Victoria, 3934



LIBRARY


Fred Crump

The Society also has books & videos for loan from its library, made available on most public & members nights at The Briars site. Contact Fred Crump - Librarian

E-SCORPIUS NEWSGROUP

M.P.A.S. main line of communication is the online newsgroup called E-Scorpius. Here you will be kept up to date with the latest M.P.A.S. news & events information as well as being able to join in discussions & ask questions with other members. To join, email welcome@mpas.asn.au say that you want to join E-Scorpius & you will be added to the E-Scorpius list.

facebook
MPAS members - https://www.facebook.com/groups/MPAS1/
MPAS public - https://www.facebook.com/mpas0/

VIEWING NIGHTS - MEMBERS ONLY

Members only Viewing Nights - any night at The Briars, 450 Nepean Hwy, Mt Martha. Members visiting The Briars for the first time must contact Greg Walton on 0415172503 if they need help getting to The Briars site. Upon arrival at the site, remember to sign the attendance book in the observatory building.

For additional details:
Internet: www.mpas.asn.au
email: welcome@mpas.asn.au

Phone: 0419 253 252
Mail: Mornington Peninsula Astronomical Society
450 Nepean Hwy, Mount Martha, Victoria, 3934

Members please write a story about your astronomy experiences and add some pictures.
Send them to the editor: Greg Walton gwmpas@gmail.com
MPAS newsletters online - https://drive.google.com/folderview?id=0ByvkxzZGI9g_SUNmZVhkZTFGWTA

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