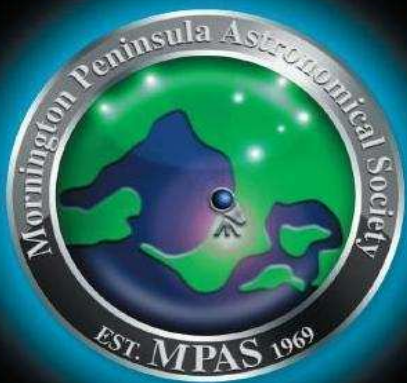


Cover image - June 21st MPAS working bee & members night.
MPAS site imaged by Ben Claringbold



SCORPIUS

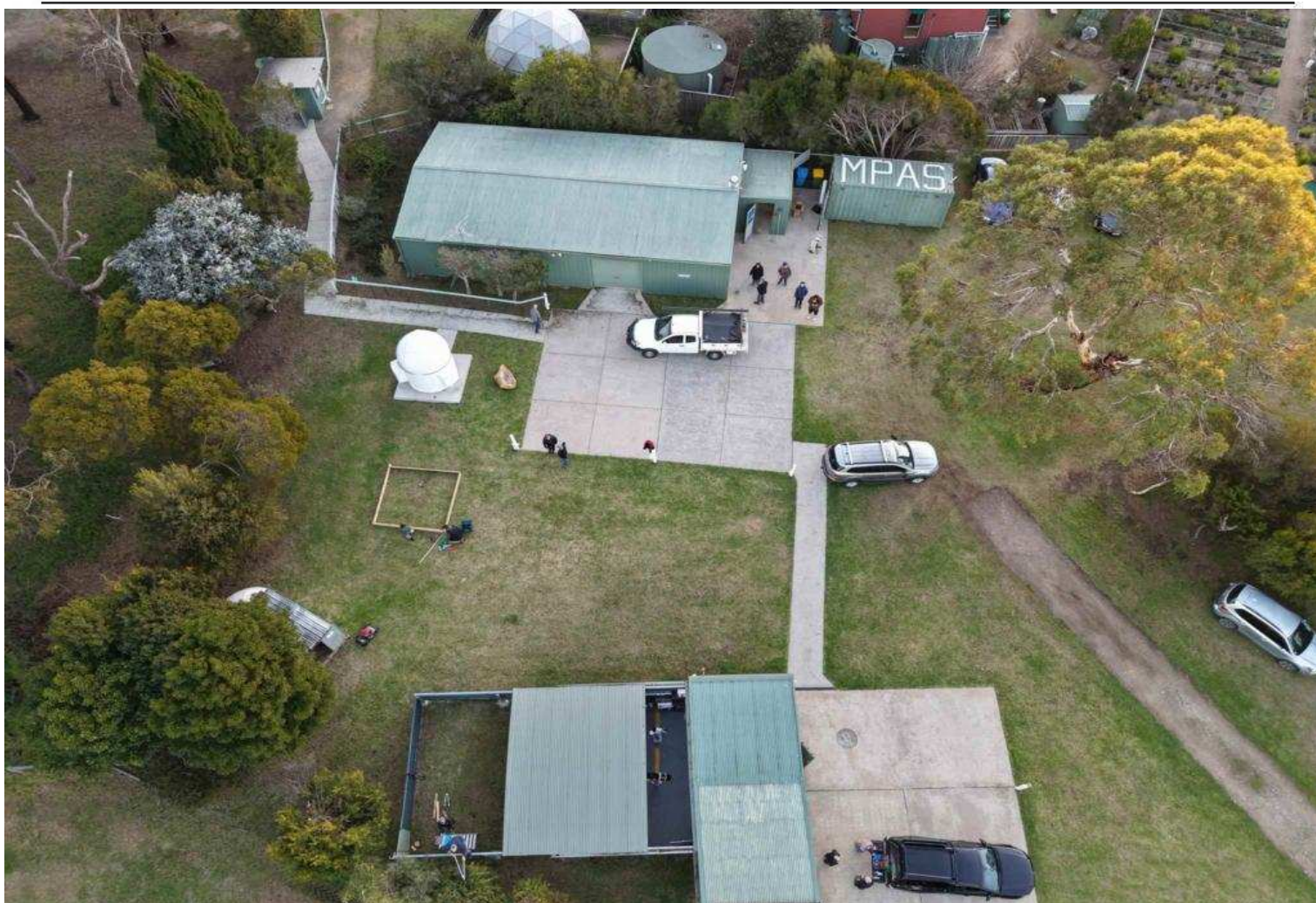
THE JOURNAL OF THE
MORNINGTON PENINSULA ASTRONOMICAL SOCIETY INC.

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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.



MPAS - <https://www.facebook.com/mpas0/>

MPAS Members - <https://www.facebook.com/groups/MPAS1/>

Scorpius MPAS - <https://www.facebook.com/Scorpius-MPAS-1694951307446763/>

Mornington Peninsula Astronomical Society

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SOCIETY NEWS



Public Viewing Night May 2nd - Under clear skies all evening, the May public night saw a lot of activity on-site with at least 110 people in the auditorium.

After some visitors saw the crescent moon before it set, and following some hasty fixes to technical issues arising, the talk indoors began. For the first hour, the talk was started by Peter Skilton, who was then assisted by Katherine McCoy after she emerged from the darkness by surprise. Then a 3rd young speaker (late Primary school age possibly) confidently joined in! She was sitting in the front row and proudly proclaimed to be an aficionado of Prof. Brian Cox's videos and asked lots and lots of questions as her (I guess) mother or grandmother quietly tried to shrink in her seat next to her. Eventually her enthusiasm got the best of her, and she leapt up and joined me at the front by the screen, excitedly telling everyone about the minor planet, Ceres. Her confidence was certainly impressive, and very rewarding for all who saw it. I reckon there's a budding astronomer in that girl.

After 9pm, the group then moved outdoors to view the night sky, with Mars being the only really prominent planet on display at the time. But the sky was nicely clear and moonless most of the evening.

Other members attending and helping on the night included Michelle Sykes, William Jennings, Chris Kostokanellis, Fred Crump, Paul & William Tughton, Jennie Cioccio, Jamie Pole, David Rolfe, Sylvie Grandit, Phil Peters, Simon Hamm, Greg Walton, John Goodall, Mike Smith, Kathryn & Ray Harley, Wayne Redpath, Peter Skilton, Ben Claringbold, Lucas & Kate Cusack, Dilpreet Singh, Jasreen Kaur, Jenny & Brian Thomas, Arron & Ethan Yuen, Dorothy & Angel Sinna, Guido Tack, Alira Coffey, Michelle & Sebastian Moore, Ann & Natalie Hampson. Members are reminded to sign the members' attendance book on the night. Apologies for any incorrectly spelt names where the handwriting was too challenging for me. *Getting ready for the PVN, image below by Greg Walton*

In short, it was a really good evening, sharing the stars and our knowledge with a lot of very interested people. *Regards, Peter Skilton*



By Greg Walton

School Viewing Night May 5th - The first to two groups this week from Mornington Primary School came to the observatory for some stargazing last night. This group consisted of 45 pupils and teachers. Conditions were unusually warm for this time of year, with the wind being quite strong at times. The kids started outside on the telescopes so as to be sure of catching the waxing crescent moon before it set and see Mars. Plus the cloud cover began relatively clear, but was threatening to thicken up later in the evening, so it was decided to begin with the outdoors observing.

Then everyone moved indoors to hear Katherine McCoy and Peter Skilton give the talk and answer questions. While some of the pupils were certainly wide awake and brimming with questions the whole time, there were a few who looked like the camp had been a physically long and tiring experience and this was probably their last night before returning home. So, consequently, a few were seen to be nodding off during the talk. Nevertheless, the teachers seemed very happy with the evening.

Other members helping run the night, and signing the attendance log, included Chris Kostokanellis, Sylvie Grandit, Greg Walton, Jamie Pole, Fred Crump, Phil Peters, Stephanie Ng and Ben Claringbold. *Regards, Peter Skilton*

School Viewing Night May 7th - The second Year 3 & 4 group this week from Mornington Primary School, came marching across from the Education Camp to the observatory for some stargazing last night on May 7th. Their excited chatter was readily audible from indoors as they approached from afar and, by all accounts, didn't appear as tired as the initial group this week, except for one young lad in the front row who ran out of puff and nodded off just before it was telescope time. I reckon it was probably me talking about the tides that pushed him over his threshold of consciousness.

This was a slightly larger group than the first one, and consisted of 60 pupils and 7 teachers. It was windy and fairly clear skies much of the afternoon, but the wind was chilly and deserving of a jacket. As the Sun set, the skies became more overcast and there was slight precipitation.

The talk was given indoors by Katherine McCoy and Peter Skilton, and we even had a few questions arising about multiverses and our Universe's boundary, amongst other topics like that, which are obviously taught to Primary school-age kids these days.

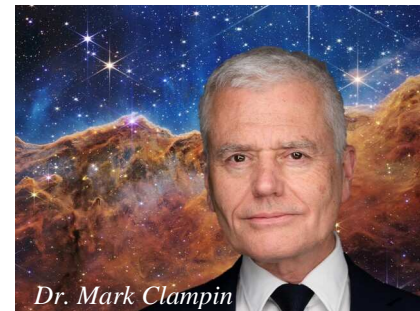
During the talk the skies cleared enough for a good view of the Moon and a few other star clusters, so the presentation was rapidly halted and, in the blink of an eye, it was outside to the telescopes for everyone.

We had a Year 10 work experience student, Alex Sim, from McClelland College in Karingal who started at the Briars with us today and, throwing him to the lions at the end of his first day, he had to operate a Dobsonian telescope on his own, pointing it at the Moon while the pupils lined up to look through the eyepiece and asked him any questions. This is quite a good aerobic exercise as you have to keep bobbing up and down to re-aim the instrument after every kid or two, as the Earth rotates and points the field of view off-target. Not to mention when one of the pupils nudges or grabs the telescope tube while trying not to bang their eye on the eyepiece. Alex handled the new experience well, and seemed to very much enjoy showing the Moon to the visitors.

Other members braving the conditions and helping prepare for, and run, the night were Phil Peters, Greg Walton, Chris Kostokanellis, Fred Crump, Sylvie Grandit, Mark Stephens, Fred Crump, Ben Claringbold and Jamie Pole. *Regards, Peter Skilton*

Society Meeting May 21st - The meeting this month is JWST-related and is all about how the James Webb Space Telescope was designed, presented by Dr. Mark Clampin who was Director of the Astrophysics Division at NASA headquarters in Washington DC at the time of the talk, and previously Director of the Sciences and Exploration Directorate at the Goddard Space Flight Center. He explained how JWST arose from the shortcomings encountered with the Hubble Space Telescope, and looked at the new space-based observatories that are on the immediate horizon, peering ever further back in time in the Universe.

Covered this month was also AstroMoPho continuing its astrophotography theme another month, in absence of Chris Kostokanellis, and Guido Tack gave Sky for the Month.



We closed with a 3-dimensional journey into the Gum 31 star-forming nebula in the constellation of Carina, adjacent to the Southern Cross. This was one of the first images publicised from the newly live JWST, and informally came to be known as the Cosmic Cliffs. It shows jets of activity from new star systems coming into existence within the thick clouds of swirling gas and dust. The video is courtesy of NASA, ESA, CSA and StScI. It is set to "Spirit" by Infraction from the No Copyright Music channel.

And if you look really closely, you might spot a crocodile, a moth, a lobster and other imaginary creatures in the nebula's folds, twists, nooks and crannies. *Regards, Peter Skilton*

Most recent video on the channel: <https://www.youtube.com/channel/UCm6XOkIcIflt4y0XRBXpXuw>

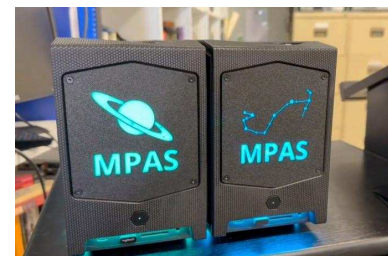
Or watch it on the MPAS site once it's refreshed for this month: <https://www.mpas.asn.au/meeting-recordings/>

Astrophotography Group meeting 24th May - The MPAS Astrophotography Group had its first meeting for the year yesterday, 24/5/2025, after the well attended members BBQ and working bee. Approximately 23 members attended the meeting, during which we familiarised ourselves with the new MPAS computer, which has been purchased for use by the Astrophotography Group, as well as for live streaming images from Seestar and ASIAIR devices on site during public and member events.

MPAS purchased 2 PCs; and Guido Tack 3D-printed 2 new customised facias for them.

The Saturn PC pictured below runs the AV system, and the Scorpius PC has various planetarium and image processing software on it, as well as an Nvidia 4060 Graphics card to make short work of various processor intensive tasks and planetarium software.

Chris Kostokanellis gave a quick run down on the free software that has been installed on the PC, such as Stellarium, DeepSkyStacker, Siril, GraXpert, GIMP, PIPP, Registax, Wavessharp etc.



Some members bought their cameras, and with clear, albeit windy conditions, some imaging was done, both wide field as well as through the telescopes in the observatory.

If there is a particular topic that you want the AP Group to discuss at a future meeting, please let me know. Also, if you have knowledge of certain software or equipment and are able to demonstrate it on the MPAS PC or your own laptop for AP Group members, let me know and we can arrange it for a future AP Group meeting. If you are interested in joining the MPAS E-Scorpius AP Group and are having difficulty doing so, let me know.

Clear Skies. Chris Kostokanellis



By Ben Claringbold

Working Bee and BBQ 24th May - Saturday's working bee and BBQ turned out to be a roaring success, with a nice top of 18 degrees! There was a cool wind, but it wasn't enough to deter the just over 30 members who attended.

As usual, we started by mowing, whipper snipping, cleaning inside, and setting up the tables and chairs. I'd like to welcome new members Andrew Macauley, Michael Barrow, and Daniel, Ally and Lewis Midwood, who joined us for their first working bee, and didn't hold back on chipping in! Greg and Isaac Markowsky were there as well, and with all of them whizzing around, this gave me the opportunity to take some photos!

In the kitchen, the dinner preparations got under way, with Anne Danne, Sylvie Grandit, Marilyn Clews, and Ally and Lewis, all busily chopping up salad ingredients, buttering bread and warming things up, etc. Jamie Pole soon arrived with the shopping, and the BBQ was fired up by Mark Stephens and Jamie.

Ben Claringbold has a new toy! Ben bought a drone last week, and couldn't wait to try it out, with some great aerial shots of the site. I'm sure we'll be utilising this in the future. He got a nice shot of Greg Walton working on one of our many reflector telescopes, and you can also see the MPAS sign on the container roof. I love it!

It wasn't long before the sun was setting, with a beautiful red sky to end another very successful working bee. We even saw a mob of kangaroos in the bottom paddock, with two males boxing. With the BBQ cooked, and the kitchen preparations ready, we all headed inside for a delicious dinner. Many members also brought their own side dishes, with too many for me to mention! And of course, there were some lovely desserts on offer, for those that could fit it in.

With full tummies, we then had a bonus astrophotography presentation, given by Chris Kostokanellis. Chris was keen to try out the new PC for just such an occasion, and there was no shortage of very keen listeners, with many questions afterwards. Guido Tack also did some creative magic for the front of the PC's. The presentation was a great extra to the night, with much activity under a nice clear sky.

Well, that's about it for now. If I've forgotten to mention anyone, just know that you're all awesome, and hopefully we'll see you all again next time! (See photos.) Warm regards, Phil Peters



Isaac & Lewis



Guido



Greg Markowsky



Michael



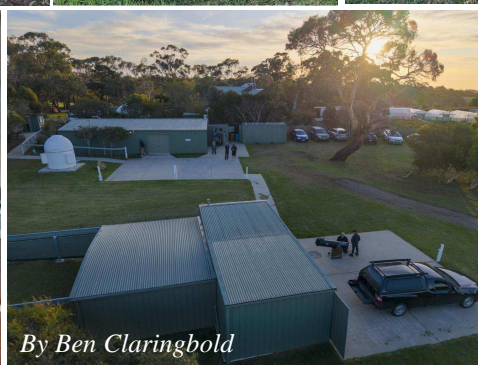
Daniel



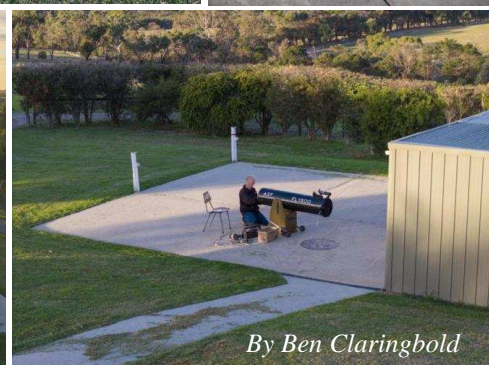
Andrew



Back - Anne & Sylvie Front - Ally & Lewis



By Ben Claringbold



By Ben Claringbold

Scouts, Cubs & Guides Viewing Night May 30th - saw 23 visitors from the Langwarrin Girl Guides visit the Briars, with the coordinator being the 2IC for Girl Guides Victoria. The evening began with the talk indoors, given by Katherine McCoy and Peter Skilton, with lots and lots of questions arising, which is always good to see. The nickel-iron meteorite proved popular, with one Guide and her mum originally coming from Argentina, where it'd fallen, and they hadn't previously realised that. Needless to say, but they ended up buying a smaller sister of the one handed around after Simon Hamm had finished with them. He almost sold a second one as well to another Guide.

They were prepped all about the Aurora Australis, which was timely given a strong display of the Southern Lights in our skies about 3 days later. Unfortunately the skies remained totally overcast all evening, preventing any outdoor telescope usage, so the visitors were shown around the observatory after the talk.

Other members present and helping with the running of the night were Chris Kostokanellis, Phil Peters, Fred Crump, Manfred Berger, Sylvie Grandit, Mark Stephens and Ben Claringbold. *Regards, Peter Skilton*

Public Viewing Night June 6th - June's public night at the Briars was cool, with complete cloud cover most of the evening, but the rain held off. Indoors, after a surprise 15 minute ordeal getting into the audiovisual system, Trevor Hand gave the meteorites talk to 53 visitors plus some members for about an hour. The skies were still completely cloudy after the group emerged, so telescope usage wasn't possible. Instead the visitors were shown the observatory facilities, had further questions answered, and invited back for viewing next month if they wished.

Other members present and helping with the night were Chris Kostokanellis, Greg Walton, Simon Hamm, Phil Peters, Fred Crump, Sylvie Grandit, Peter Skilton, Manfred Berger, Jamie Pole, David Rolfe, Ben Claringbold, Aaron & Ethan Yuen, and Stephanie Ng. There was a lot of huffing and puffing by members during the talk to try to move the clouds on and, sure enough after the public had left, the skies had cleared by 10pm. *Regards, Peter Skilton*

Scouts, Cubs & Guides Viewing Night June 10th - saw 44 visitors from the 1st Balnarring Scouts and associated Joeys attend the Briars at 6pm for some stargazing.

Cloud cover was about 80% but patchy, so the evening started with some lunar observing of the almost Full Moon through the telescopes, just in case the cloud thickened. Then the group moved indoors to hear Katherine McCoy and Peter Skilton give the talk and answer questions. And, although they were very young, the Joeys sitting in the front rows of seats didn't hold back one bit with the questions throughout the talk. And the boys and girls in the Scouts present also asked plenty, especially about Black Holes and White Holes, which seemed to have a particular fascination that evening.

The talk finished just before 7:30pm, in time for everyone to move outdoors to see the rare occultation (which literally means "hiding") of Antares by the Moon. Having a bright star that is readily visible to the naked eye at a sociable hour, pass behind the Moon, and then later reappear from the other side of the Moon, is something that occurs only every decade or two. It happens because the Moon moves through the sky slightly slower than the background stars (with Earth rotation). This is also one of the reasons for some UFO reports in the past from inexperienced observers. So the stars catch it up from behind, disappear from view for about an hour, then overtake the Moon on its leading edge. The star appears to be something launching from the surface of the Moon. This movement of the Moon is because it has its own orbital motion around the Earth and is close to the observer, so the effect of the motion is magnified and is in addition to the spin of the Earth itself and the Earth's orbit around the Sun. The background stars, however, are extremely far away, and their position as they move across the sky is effectively only governed by the Earth spinning on its axis once every 24 hours approximately, and slowly inching its way around its orbit about the Sun.

Other members present and helping on the night included Fred Crump, Phil Peters, Stephanie Ng, Sylvie Grandit, Ben Claringbold and Chris Kostokanellis. *Regards, Peter Skilton*

Special Society Meeting June 15th - Saturday evening saw 17 members in attendance to vote on changes to the Society's constitution. These changes would mean that MPAS would be exempt from paying tax. There were also 30 proxy votes sent to the treasurer. Peter Skilton chaired the meeting, while Phil Peters acted for the Secretary. Jamie Pole seconded the motion to change the constitution. All present voted in favour, along with the 30 proxy votes. The meeting closed after 11 minutes.

Big thanks to all who attended or sent in a proxy vote.

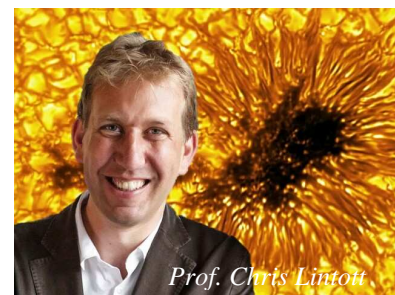
Society Meeting June 18th - The meeting this month is about understanding all about the Sun and the current space probes in close proximity to our star, presented by Prof. Chris Lintott, Astronomer at Gresham College in London.

Covering the last 2 months astrophotography challenge "Earth and Sky" by Chris Kostokanellis, and Guido Tack gave Sky for the Month.

Many would be aware that the Sun is half way through its life and has about 5 billion years of fuel left. But exactly how did astronomers arrive at that number? It's quite involved, but logical. Dr. Becky Smethurst of Oxford University dives into it, showing the centuries of knowledge that have been accumulated in order to work it out.

We close with the European Space Agency's Solar Orbiter imaging our Sun's south pole, the first time this has been possible. It is set to "True Power" by Cold Cinema from the No Copyright Music channel.

Most recent video on the channel: <https://www.youtube.com/channel/UCm6XOkIcIfl4y0XRBXpXuw> *Regards, Peter Skilton*



Prof. Chris Lintott

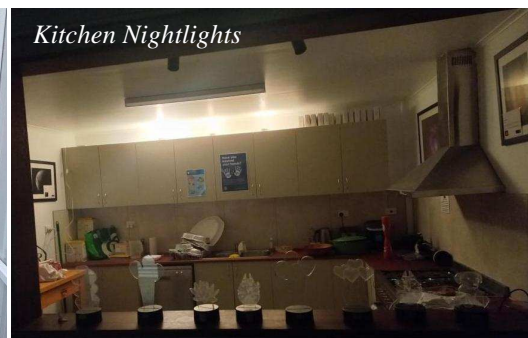
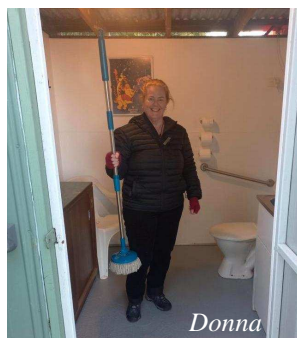
Members Night BBQ, Working Bee June 21st - Saturday's working bee and BBQ was an absolute ripper, with the biggest turnout that I've seen! It was only 13 degrees at 4pm, but the cold weather didn't deter the 34 members who attended, with a sunny day and super clear skies as well! I'd like to welcome new members Bruce Bott and family. I hope you all had a great time!

Being the shortest day of the year, the lawns didn't need mowing. This was great, as it gave us the opportunity to do lots of other cool stuff. Chris Kostokanellis and Greg Walton organised and built the base for our smaller, ready to assemble dome, which was kindly donated by the late David Girling's partner, Robyn. Chris brought the timber needed, along with the monthly food shop. With lots of help from everyone, and digging up my poor lawn, the base was put together, ready for the next stage. Stay tuned!



We also had the opportunity to trim some trees on the eastern fence line. Mark Reid, Greg Markowsky, Kerima Potemkin and Donna Blackwood all did an awesome job trimming the treetops. Ally Midwood did a great job cleaning inside the observatory, and Daniel Midwood decided to grab the whipper snipper, with help from their son Lewis.

And of course, all the usual cleaning and food preparation had to be done. Ally and Donna did a super-duper toilet shed clean, sweeping it out thoroughly and mopping. Stephanie Ng whizzed around cleaning all the cobwebs, and the BBQ shed was swept out as well. Inside, Greg M and others stacked the chairs and set up the tables for dinner, while the massive kitchen crew got to work chopping and preparing, including Anne Danne, Sylvie Grandit, Sheryl Brown and Stephanie. I do remember poor Sylvie crying at one stage, while she was chopping up the onions!



Guido Tack was also busy in the kitchen, although I have no idea how he fitted! Guido assembled some night lights above the kitchen cupboards for when members are doing imaging outside, and just general stargazing really. The main kitchen lights are a bit bright, so this enables members to still use the kitchen during stargazing mode.

We are getting new chairs for the auditorium! The old ones have been great, but are past their use-by now. We bought 15 as a trial, with various unsuspecting test subjects (members) being used to try them out. They all survived, so another 100 have been ordered! This of course means we have to store the old ones somewhere when they arrive. Into the shipping container they go, with much help from Greg W and others. Just don't try and open the container door just yet! We'll find a home for the beloved old ones I'm sure.



The Sim family, including Alex, our recent work experience student, attended their first working bee. Alex's dad Albert brought his homemade Chinese BBQ pork to add to the usual BBQ, and along with Anne's culinary masterpieces, not to mention everyone else's yummy contributions, we had the best winter solstice dinner and desserts ever! Mark Stephens, Ben Claringbold and Albert cooked the BBQ, and a huge thanks to all the members who cleaned up afterwards!

After dinner, various members did some stargazing and imaging. Greg W had the observatory open, and Dennis Cooke, Sylvie, Mark S, Izaak and Chris were all doing imaging outside with their Seestars and other setups. I'm sure they'll post some of their results on FB members and E-Scorpius. It was very cold, but a nice clear sky if you rugged up, and I think it was a perfect end to a perfect day.

Sorry I can't mention you all, but a huge thank you for your help, and know that you're all awesome! I've included heaps of photos, and below is a link to a time-lapse from Ben's drone! https://drive.google.com/file/d/1IYybRhZR50Z5xOgs_WyfUwxGTnyQtvcZ/view?usp=sharing

Warm regards, Phil Peters

Scouts, Cubs & Guides Viewing Night June 24th - MPAS last night visited Narre Warren South Scout Group at their impressively new and large local hall, with the boys and girls including Joeys, Cubs and Scouts spanning a wide range of ages. The talk was given by Peter Skilton, and had lots of good questions, and some statements of fact, from the kids. One Cub even asked about Hawking radiation from Black Holes. It was followed by Phil Peters and Ally Midwood (on her first outreach night) showing them how a Dobsonian telescope works, for about half an hour. Also attending were perennial optimists, Chris Kostokanellis, Sylvie Grandit and Fred Crump. Unfortunately it was cold with sometimes drizzly conditions all evening, so telescope usage outdoors wasn't possible this time round.

Regards, Peter Skilton

Scouts, Cubs & Guides Viewing Night June 26th - Forty enthusiastic visitors from the 2nd Mornington Joeys and Cubs came to the Briars on June 26th for some stargazing and, indeed, the evening began with a generous clearing of the clouds, and so telescopes were employed first up to look at the Moonless evening sky. About half an hour later, everyone moved into the warm to hear Peter Skilton give the talk and answer questions as the clouds rolled in fully. Then it became clearer again once everyone had left for bed, of course.

Members helping with the evening and operating telescopes included Ben Claringbold, Manfred Berger, Fred Crump, Mark Stephens, Jamie Pole, Greg Walton, Rod & David Brackenridge and, naturally, Anders Hamilton who was displaying publicly his affiliation by being outfitted in a Scouting uniform with scarf and matching woggle. I might have missed seeing it, but his uniform looked like it could do with an MPAS embroidered patch or two sewn on, so as to help make it look even smarter. Or a beanie at very least. I don't know about the dyb, dyb, dyb, but there were plenty of Dob, Dob, Dobs in use during the evening.

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 gwmipas@gmail.com

Work Experience at MPAS

Hi everyone! I'm Alex, a year 10 student with a strong interest for astronomy. I was always intrigued by the unknowns of the universe. And at one point I even decided to get a telescope so that I could witness the beauty of space with my own eyes. I wasn't incredibly successful, but hey, everyone has a starting point.

And my starting point just got elevated when I came across the MPAS website as I was looking for work experience opportunities. When I sent an email to enquire, asking if I could complete work experience at the Mount Martha Observatory, I didn't actually expect the answer to be yes!

But good things come to those who wait, and sure enough, Dr. Peter Skilton, the president of MPAS, very generously replied to my email and told me that there might be an opportunity. And by that Wednesday, I had all the details for my placement. That was the beginning of this wonderful experience!



Day 1 - Wed 7th May - Induction 4pm to 9pm onwards

My first day of work experience! So far, I had only seen the official website, but now I'd get to be at the observatory in person! At the entrance, I met Dr. Peter Skilton in person, as well as Phil. They were very kind and welcoming, and I immediately felt a lot less nervous. After all, this was still a completely new experience for me.

The MPAS site was a little different to what I expected. I imagined that it would be very formal, with a lot of complicated mechanisms, but I was pleasantly surprised to see that it was a more casual environment where you get to have fun and learn about astronomy. I got a tour around the site, entered the observatory, and got to see many different types of telescopes. I even got a chance to learn how to use an 8-inch Dobsonian telescope, which I especially enjoyed. I also received a red-light torch, a gift from Phil. He taught me that it's better to use a red-light torch at night because it would be less problematic for the human eye night vision, which was an interesting fact.

We then returned to the Don Leggett Astronomy Centre. Here, I learned about the planisphere, a disk that allowed you to see the location of different celestial objects at a specific time, as well as the Almanac, a book that would show you a lot of information about astronomical events at specific times of the year. I also got the chance to hold a meteorite, which I thought was pretty awesome. I was particularly amazed by the astrophotography images that were showcased on the walls.

After that, it was finally time to prepare for the stargazing night. I put the welcome sign out, checked the toilets for supplies, cleaned the auditorium, and helped set up the chairs. These seemed like ordinary tasks compared to what I learned before, but I was happy that I was able to help. I got to meet some other members at MPAS, including one of the speakers, Katherine and the Vice President Chris. I also got a gift from Greg, which was a DIY-sundial kit that he made. I took some group photos with the members, and it was a blast. For me, the stargazing night was certainly the highlight of the day. I got to listen to a very interesting and informative talk about astronomy, and even though the main audience were year 3/4 pupils, I still managed to learn something new! Unfortunately, it seems like we brought the rain with us, so using the telescopes weren't an option. Or at least, that was what I thought.

Halfway through the presentation, by some sort of miracle, the rain stopped, and the clouds started to disappear. We immediately went to get the telescopes out. All hands-on deck – including me!

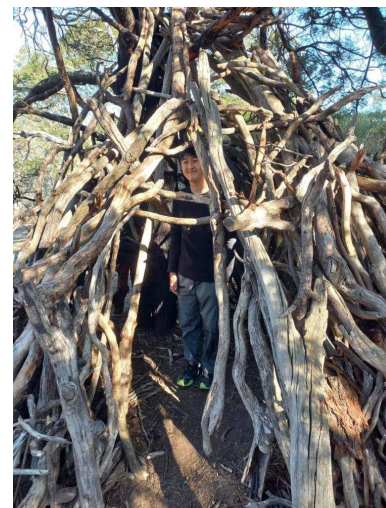
My favourite part was that I got to show the kids a close-up view of the Moon through the 8-inch Dobsonian telescope that I learned how to use earlier (under supervision). They all thought it was cool, and I couldn't agree more. I remember even being asked to show them the stars, which genuinely made me very happy. Despite not being able to do that, it's nice to see other kids being fascinated by the same thing as I did.

It was a cold night, but my heart felt warm.

Day 2 - Monday 12th May 12pm to 4pm

I was delighted to hear that I could start an hour earlier. It turns out, Phil has offered to show me around the wildlife sanctuary. It was not an official part of my work experience, but it will definitely help me familiarise with the environment.

I arrived at the Briars at 12pm, and was greeted by Phil. We entered the main building, where there were some friendly staff. We then set off on a 2 km wetland walk. Along the way, I saw lots of trees, some birds, and a few adorable wallabies. There were also some tent-like structures that were built by kids. I took a photo in one of them. There was also an observation platform, where I could see the whole of the Briars and the observatory. The trail was beautiful, and I am looking forward to the 4km woodland walk sometime.



After the walk, it was time to go to the observatory for work experience. I learned about the different classifications of meteorites, specifically iron meteorites, stony meteorites, and stony-iron meteorites.

I got to see periodic tables that had actual elements inside them (except the radioactive ones of course), and real uranium glass! I also learned how to measure the density of a meteorite by using an electric scale (to figure out the mass) and Archimedes' Principle (to figure out the volume), which involved putting the meteorite at the bottom of a container and filling it up until the water level reaches the top, measuring the volume using a measuring cylinder, then pouring the water out and subtracting that from the original to figure out the volume of the meteorite. I did this for a large meteorite, and its density was about 7.35 g/cm^3 . By doing this, I was able to tell that it was a nickel/iron meteorite.

Day 3 - Tuesday 13th May 7pm to 10pm

I measured the density of a second, much smaller piece of meteorite using the same method, with a smaller cup and measuring cylinder. Its density was 3.14 g/cm^3 , and from that I was able to tell that it was a stony meteorite.

After doing that, I met Greg in the observatory. I had my first lesson on astrophotography, and with Greg's guidance, I took some pictures with a camera with the 127mm and 350mm telescope. I took photos of Alpha Centauri, the Carina Nebula, and a couple of other star clusters. My first images weren't the best quality because the moon was too bright that night, but I was pretty satisfied with the results. I especially liked the photos of the Carina Nebula - "enchanted" was how I described it. I wasn't able to stack the photos due to the application not being on the computer, but it only made me more excited for tomorrow.

Day 4 - Wednesday 14th May 7 to 10pm

I received an entire telescope with an equatorial mount! This was the third gift that I received since the start of my work experience. It had an equatorial mount, which was something that my previous telescope did not have. This would help me be able to see more parts of the universe with a telescope and keep up with the Earth's rotation, maintaining consistent focus on the object that I am viewing. This was probably one of the biggest reasons for my previous failures, and I'm glad that's coming to an end. Phil taught me how to use the equatorial mount on my new telescope and showed me a way to take pictures accurately with my phone, using a device called a 3-axis universal smartphone adapter. Using the telescope, I was able to take some great pictures of the Moon.

After that, I continued working with Greg in the observatory. I got to stack some images using DeepSkyStacker, which turned out to be a beginner-friendly tool that was fairly simple to use. I learned that photo-editing was also part of the process and edited some photos using PhotoPlus 4. My favourite ones out of all of them were still the images of the Carina Nebula, as it looked even more mesmerising after the image stacking and editing.

Day 5 - Thursday 15th May 7 to 9.30pm

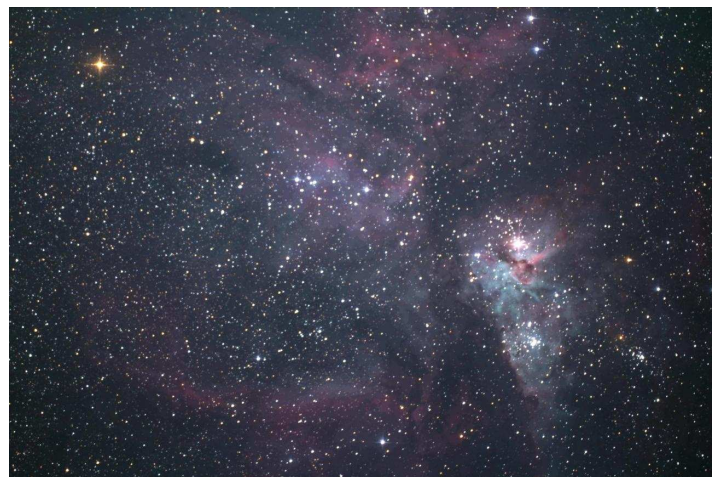
Final night, Seestar night! I was overjoyed when I heard that more members showed up just to educate me and demonstrate how to use the Seestar, which was a portable telescope with a built-in camera that was connected to an application. The app could locate different celestial objects, automatically aim the Seestar at them, and automatically take photos. I learned how to use this smart telescope from Manfred, Sylvie, and Mark, who were all very enthusiastic when introducing me to this new telescope. Mark and Manfred showed me some amazing images that they were able to capture, and Sylvie taught me how to use it and I was even allowed to play around with the application. I looked at some stars, nebulae, and even galaxies. I was told that the Seestar actually had a really good price for its overall functionality, and I'm thinking of getting one for my future astrophotography.

Another member, Ben, also brought his imaging telescope – a Zenithstar 81 with a camera attached as well as some other cool gadgets, including an attachment that keeps the temperature low to optimize image quality. It was more advanced than the Seestar, and if I wanted something like this, I would definitely need to get a job.

I also took some more photos in the observatory with Greg. Unfortunately, the skies started to become cloudy earlier than expected and everyone had to pack up early. Greg helped me upload all my astrophotography files to a folder and put it in a USB along with some other folders and applications. I now had my first ever astrophotography collection!

This was definitely an unforgettable event, and I will definitely be back for more. Huge thanks to all the MPAS members who helped me during that one week or so, and I look forwards to joining you guys as a member!

Kind regards, Alex



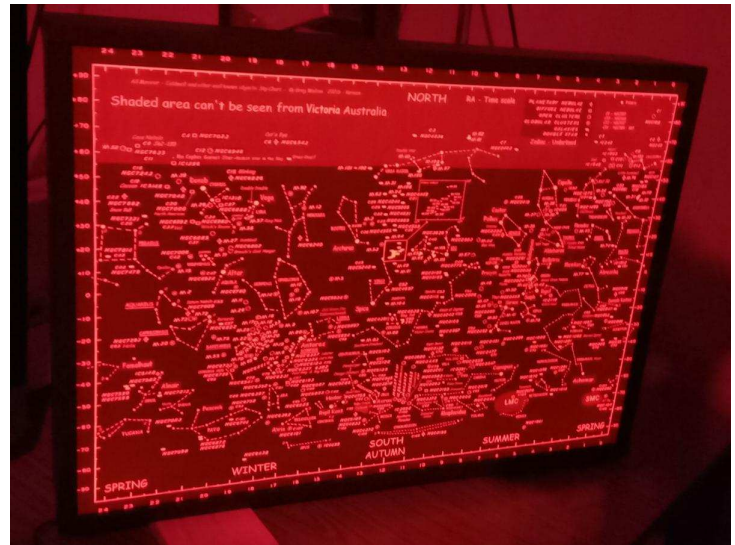
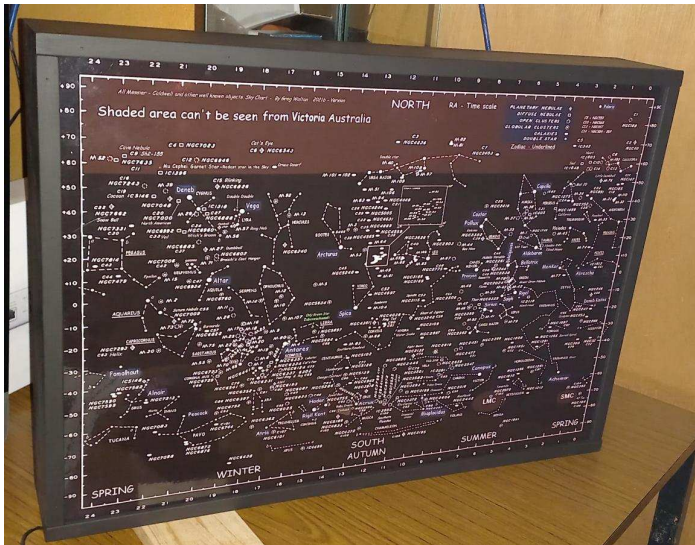
OBSERVATORY UPDATE

By Greg Walton

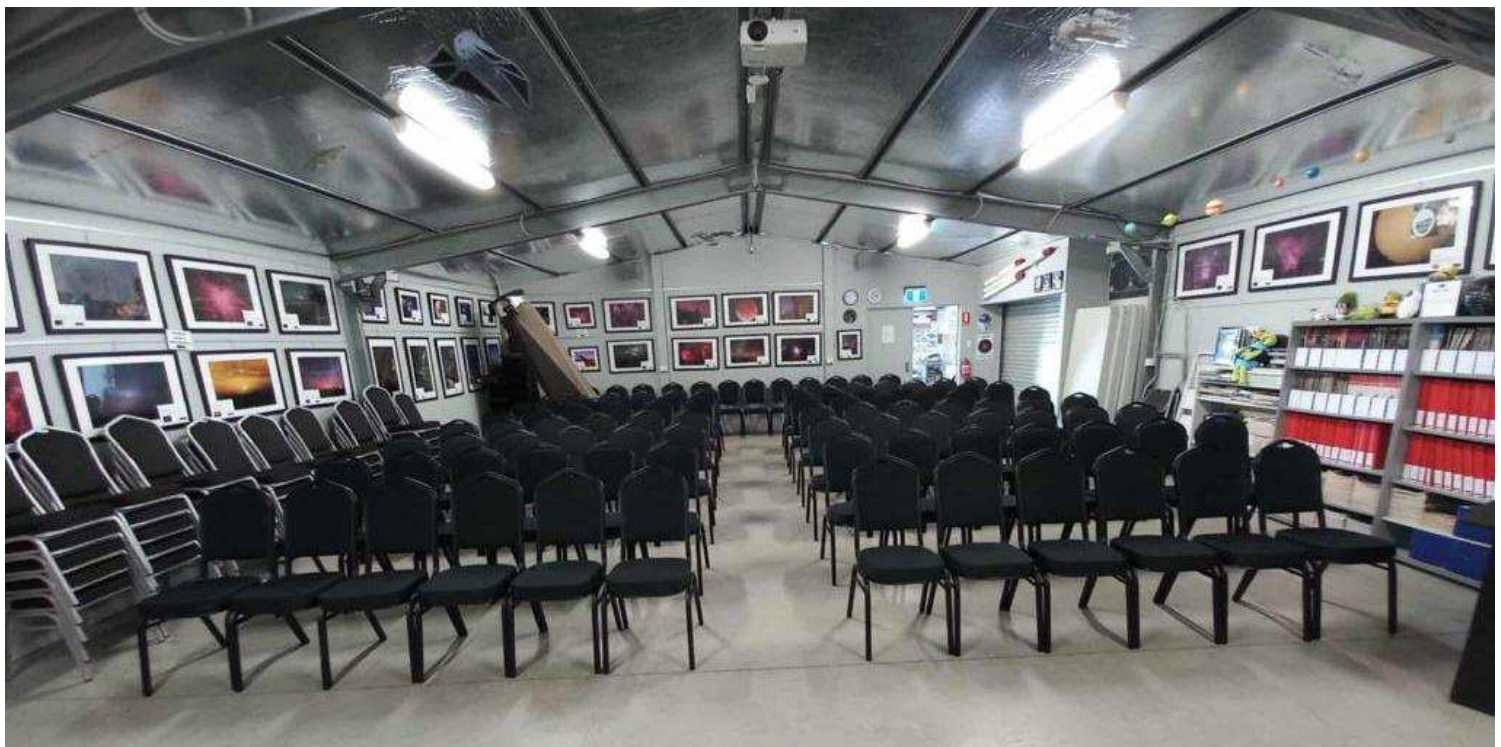


Thanks to Adrian Boschetti, we now have an illuminated star chart on the wall of the MPAS observatory. The light box has a switch to vary the brightness and plugs into the mains power.

The star chart has all the Messier, Caldwell and the most popular deep sky objects. Also includes the alignment stars for the go to hand controls for the telescopes and the best season to view object. Around the boards are the RA time and declination angle.



New chairs have arrived. Phil Peters, Greg Walton and Ben Claringbold were on hand to help removing the plastic from more than a hundred chairs and set them up ready for our next event.



WHAT'S ON



The 2025 Timetable of Public events.

JULY

Friday 4th, 8pm Briars. Public stargazing night. Speaker TBD. 90 booked.

Friday 25th, 8pm Briars. Scouts, Cubs & Guides. Speaker Katherine McCoy & Peter Skilton. 0 booked, 90 anticipated.

AUGUST

Friday 1st, 8pm Briars. Public stargazing night. Speaker TBD. 90 booked.

Monday 11th, 7pm at Cornish College, 65 Riverend Rd, Bangholme. 50 Year 10. Speaker: Peter Skilton

Thursday 14th, 7pm at Balnarring Primary School, Civic Court, Balnarring. 150 Year Prep-6. Speaker: Peter Skilton

Friday 15th, 8pm Briars. Public stargazing night for National Science Week. Speaker TBD. 90 anticipated.

Saturday 16th, 7pm Briars. Visiting families from Hong Kong. 97 anticipated, with 45 9-12 year olds. Speaker: TBD

SEPTEMBER

Friday 5th, 8pm Briars. Public stargazing night. Speaker TBD. 90 anticipated.

Saturday 13th. 8pm Briars. Astrophotography Workshop (public & members). Speakers various. Bookings not yet open.

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

★ New Members Welcome ★

Peter McConnachie

Alex Sim, Albert Sim, Karen Wu and King Sim

Brad Green

Marc Rookledge

Erica & Ryan Burmeister and Terry & Greg Morris

Andrew Wilson

Craig Hill

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:

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.

SOCIETY FEES

- \$50 – Full Member
- \$45 – Pensioner Member
- \$65 – Family Membership
- \$60 – Family Pensioner Membership

See more options on-line



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.

Vale - Shirley Barry

It is with sadness that I learned last night from Ian, after the monthly meeting at the Briars, of the passing of Shirley Barry recently. We haven't seen her at meetings for a year or so now, but she always regularly attended over the years, and was never afraid to ask a question.

Those members who frequently attend the Wednesday monthly meetings, or the social events like the Christmas BBQ, may remember Shirley always used to come along with her husband, Ian, and in more recent years with a walking stick, and was always positive and eager to learn more about any astronomy and science topic on offer.

They both joined MPAS at the time of the national NACAA convention that we hosted in Frankston in 2006 at the Frankston International Motel, which was more recently demolished and a huge Department of Justice building built on the excavation site.

In the group photo extract from the Frankston NACAA, Shirley is shown standing 6th from the left, with Ian standing 9th from the left at her side.

Shirley's funeral service is being held at Bunurong Memorial Park in Dandenong South next Monday 26th May, 12noon, in Cirrus chapel. *Regards, Peter Skilton*



MPAS - Society AGM

The AGM is in July each year.

Current Committee

President: Peter Skilton

Vice President: Chris Kostokanellis

Secretary: Nerida Langcake

Treasurer: Jamie Pole

General Committee: Trevor Hand,
Simon Hamm, Guido Tack,
Phil Peters & Manfred Berger.

**MPAS members
please consider a
position on
committee, as we have
much work to be done
for the year ahead.**

AGM Invitation

16th July 2025 at 8PM
The MPAS Briars site
Don Leggett Astronomy Centre
Nepean Hwy, Mt Martha
(Melway ref. 151/E1)

Agenda

1. Apologies
2. Confirm Minutes of previous AGM
3. President's Report
4. Treasurer's Report
5. Election of Incoming Committee
6. Special Business (Constitution updates – details to follow)
7. Special thanks
8. Close of AGM.

Have you considered joining the MPAS committee?

If you feel you would like to get involved in the society business or have a particular skill you think would be useful to the society, please give some thought to becoming a committee member.

The Annual General Meeting will be held on Wednesday 16th of July, 2025. In this edition of Scorpius there is a 'Committee Election Form'

that can be used for the submission of nominations for the next committee. This can be posted to MPAS, 450 Nepean Hwy, Mt Martha 3934 or handed to the Secretary. Alternatively, nominations can also be submitted electronically to welcome@mpas.asn.au, stating which position on the committee you would like to nominate for. Please note that voting will occur if there are more nominations than positions available.

2025 AGM Committee Position Nomination -
(Leave blank if not applicable)

I
..... would like to nominate for the position of
(circle)

PRESIDENT VICE PRESIDENT

SECRETARY TREASURER

GENERAL COMMITTEE

for the Mornington Peninsula Astronomical Society
committee of 2025/2026.

Seconded

by
..... Dated/...../.....
2025

Both the nominee and the seconder need to be financial members of MPAS at the time of the AGM. Nominations must reach the Secretary by the 9th July 2025.

CALENDAR		July / 2025					Red Days indicate School Holidays
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
		1	2	3 First Quarter	4 Public night 8pm	5 Moon at 404,627km	
6	7	8	9	10	11 Full Moon	12 Southern delta Aquarids meteor showers peak	
13	14	15 Saturn below the Moon	16 Society Meeting 8pm AGM	17	18 Last Quarter	19 Cosmology 1:45pm Working Bee 4pm BBQ 6pm	
20 Moon at 368,041km	21	22 Venus above a thin crescent Moon dawn	23 Jupiter right of a thin crescent Moon dawn	24	25 New Moon SCAG	26	
27	28 Mars above the Moon	29	30 Alpha - Capricornids meteor showers peak	31			

March Events

Public night - 8pm to 10pm on the 4th @ The Briars

Society Meeting - 8pm to 10pm on the 16th @ The Briars (Public & members)

Cosmology group meeting - 1:45pm to 4pm on the 19th @ The Briars

Working Bee - 4pm, **Members night BBQ** - 6pm on the 19th @ The Briars

SCAG = Scouts, Cubs & Guides @ the Briars 8pm to 10pm, on the 25th @ The Briars

Watch your emails, as on any clear nights the Observatory may be opened for members-only viewing.

CALENDAR		August / 2025					Red Days indicate School Holidays
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
31 First Quarter					1 First Quarter Public night 8pm	2 Moon at 404,161km	
3	4	5	6	7	8	9 NSW Full Moon	
10 NSW	11 NSW	12 NSW Saturn right of the Moon	13 NSW Jupiter & Venus 1 degree apart dawn Perseds meteor showers peak dawn	14 NSW	15 NSW Public night 8pm Moon at 369,288km	16 NSW Last Quarter	
17 NSW	18	19	20 Society Meeting 8pm	21	22	23 New Moon Working Bee 4pm BBQ 6pm	
24	25	26 Mars above the Moon	27 Scorpius Deadline	28	29	30 Cosmology 1:45pm Moon at 404,548km	

April Events

Southern Comets website - <http://members.westnet.com.au/mmatti/sc.htm>

Public night - 8pm to 10pm on the 1st @ The Briars

NSW 9th to 17th - Nation Science Week Public night - 8pm to 10pm on the 15th @ The Briars

Society Meeting - 8pm to 10pm on the 20th @ The Briars (Public & members)

Working Bee - 4pm, **Members night BBQ** - 6pm on the 23rd @ The Briars

Cosmology group meeting - 1:45pm to 4pm on the 30th @ The Briars

THE BRIARS SKY

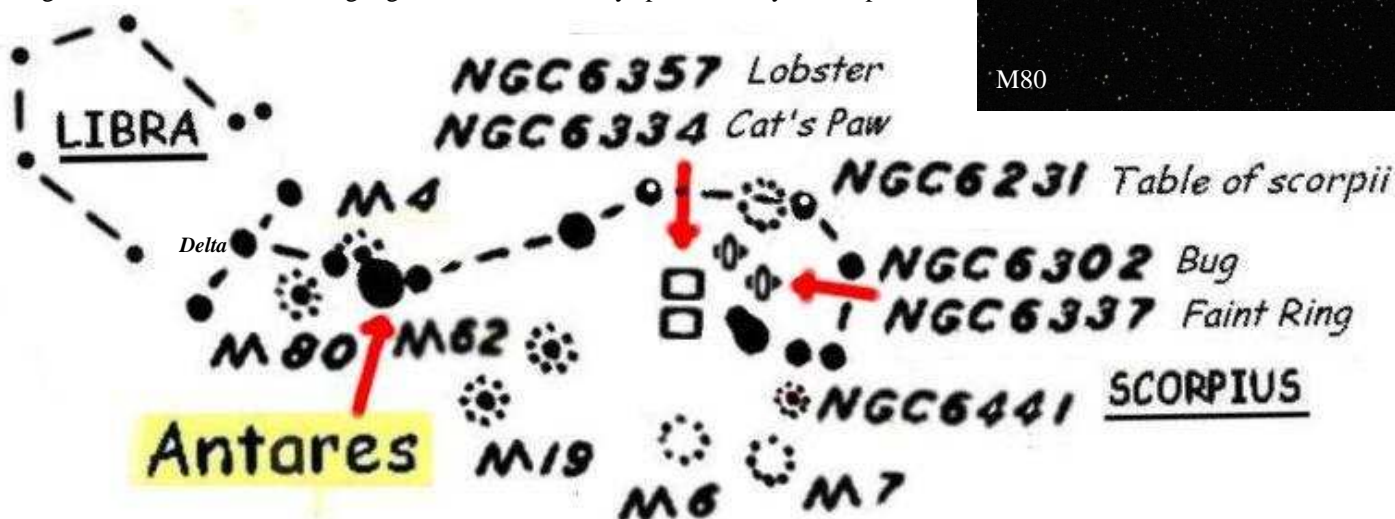
By Greg Walton



SCORPIUS

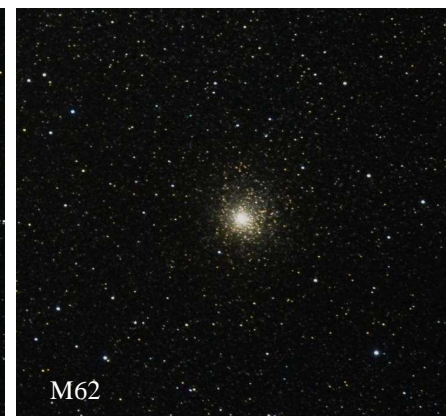
Scorpius is one of the few constellations which looks like its name. In the evening over winter Scorpius is almost directly overhead. The head of Scorpius is at the base of Libra (Scales) with the tail ending near Sagittarius (Archer) almost 30 degrees in length.

We start at the head, Delta Scorpii, a 2nd magnitude star in the centre. Moving halfway to orange coloured star Antares (Alpha Scorpii) and east 2 degrees, we find the 7th magnitude M80, a small but bright globular cluster, easily spotted in any telescope.



Now point your telescope at the 1st magnitude star Antares. In the eyepiece Antares is blinding bright and no matter how hard you try to get a good focus, Antares refuses to look sharp due to the surrounding yellow nebula called the Toby Jug and that it's also a double star system, made up of 2 red giant stars. Antares is the fifth brightest star in the sky, about 600 light years from Earth and 700 times the diameter of our Sun. In fact Antares is larger than the orbit of Mars. Its orange colour means it's getting to the end of its life.

1 degree from Antares you will find M4, a large globular cluster which has a sparse structure, sometimes tricky to find even though it's 5th magnitude and only 6,000 light years away. When viewed with a large telescope it shows very interesting strings of stars and a band of stars through its heart. Moving towards the tail we find 2 more Messier globular clusters M62 and M19. Both 7th magnitude and similar in size and appearance.



There is another globular cluster in the tail of Scorpius, 7th Magnitude NGC6441 which lays right next to a 3rd magnitude star, making it very easy to find. This star is between the 3 bright tail stars of Scorpius and open cluster M7. When you look at NGC6441 in the eyepiece, you will remember it forever and mark it as one of your favourite objects, as I have done. Don't be fooled by its small size, it's at a distance of 40,000 light years and is thought to contain about 1 million stars. NGC6441 sits in a bright dense star field with dark nebulas, making it a worthy object for the Astrophotographer. Once you have your image, check out the area around the star. You should see a small green star which is actually the small Planetary nebula PK353-4.1

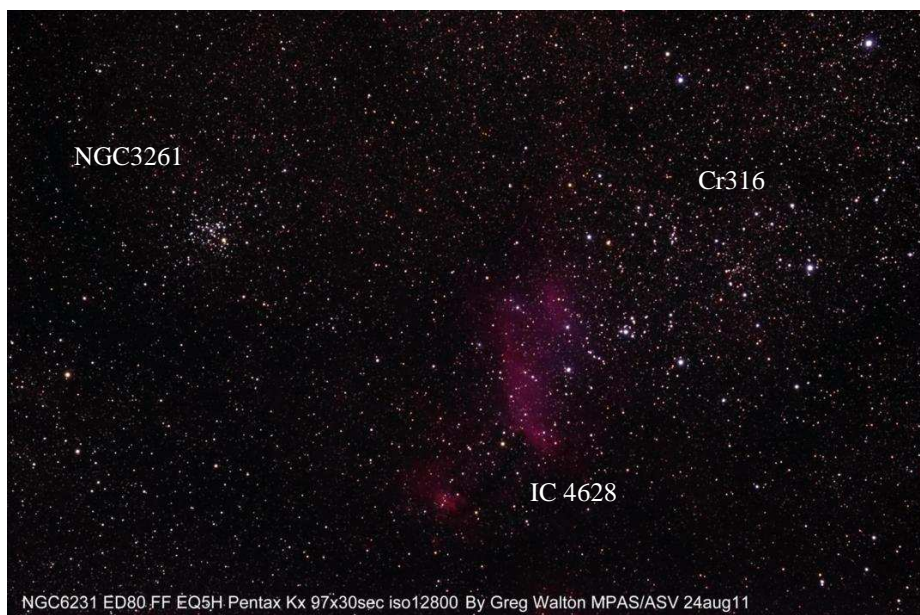


From Antares Travelling down the back of the Scorpion. You will notice 2 naked-eye double stars. Looking at the second in your finder scope, you will see a very beautiful field of stars Cr316 with a small open cluster called the **Table of Scorpion** NGC3261. In the eyepiece NGC3261 is very bright even on a moonlit night.



When imaging NGC3261 with a small 80mm telescope, you will also capture a large nebula IC4628 within the star field Cr316.

Below the tail of Scorpion there are 2 other bright open clusters. The 3rd magnitude M7 Ptolemy cluster at 900 light years and 4th magnitude M6 Butterfly cluster at 1,500 light years. Both can be seen with the naked eye in a dark sky location and are easily spotted in the finder scope or binoculars and always get a few WOW's!!! at the public nights.



Now something for the astrophotographers and Seestar owners, are the 2 nebulas inside the hook of the tail: NGC6357 the Lobster Nebula that has 4 stars in a straight line at its centre. Also called the War and Peace Nebula because it's said to contain a dove with a skull and crossbones. NGC6357 contains many young stars and is at a distance of 5,500 light years. And the other is NGC6334 the cats paw nebula which defiantly looks like its namesake and is also at a distance of 5,500 light years. Both nebulas are about the same size of a full moon, making them ideal targets for smaller telescopes such as the Seestar.

Both of these nebulas are too faint to be seen in the eyepiece, unless you use an OIII or UHC filter on a large telescope.

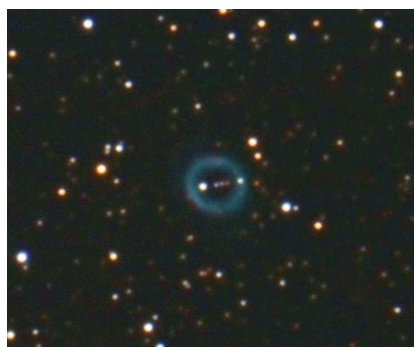


There are 2 planetary nebulas in the tail of the Scorpion we should look at. The first is the Bug Nebula C69 NGC6302. At 10th magnitude you would think it difficult to find, but because of its small size it can be easily seen in an 8 inch telescope. This planetary nebula doesn't have the usual circular shape, looking more like an ant and is at a distance of 3,400 light years.



The second is NGC6337 at 12th Magnitude; this planetary nebula is a perfect little ring hiding amongst the stars.

You will need an OIII or UHC filter and a large telescope. But once you find it you will keep coming back for another look.



If you are imaging NGC6337 with a large telescope such as the 350mm in the MPAS observatory, you will notice a line of stars passing through the planetary nebula, looking almost alien, which make you think that it has been designed by advanced beings.

Before I go, there is one more small open cluster we should look at. NGC 6204 is 8th magnitude at a distance of 3,500 light years. Located not far from the tail of the Scorpion on the border between Scorpius and Ara. NGC 6204 is a little harder to find but well worth the time.

Over the years we have tried to decide what best describes this open cluster. Could it be a horse with the bright star being its head or some other animal, then others think it's a pram or supermarket trolley.

If you decide to come to the Briars over winter when the observatory is open. Please ask if you wish to see these objects through the telescopes.

All images by Greg Walton



The Vera C Rubin Observatory is about to show us the universe like never before

The Vera C. Rubin Observatory in Chile is poised to scan the sky – smoothly, rapidly, nightly – for the coming 10 years. And we'll get our first look at the images from the Rubin Observatory on June 23, 2025.

The observatory will use the world's largest digital camera to create an ultra-wide, ultra-high-definition timelapse record of our universe. The stars of this show will be real stars being born in stellar nurseries, exploding in supernovas, getting sucked into black holes and spinning with their entourage of planets, asteroids and comets, forming the backbones of galaxies.

The world's largest camera

The Rubin Observatory, or officially the NSF–DOE Vera C. Rubin Observatory, is built on the Chilean mountain of Cerro Pachón, 2,647 metres above sea level. The high altitude and dry air gives it a view of the night sky with minimal interference.

Inside, a telescope with an 8.4 metre-wide mirror will feed light into a camera the size of a car. The 3,000-kilogram camera is the largest digital camera ever made, and each exposure will capture an area of the night sky about 45 times the area of the full moon. The camera will use six different coloured filters to take images in different light spectra from ultraviolet beyond our vision, right through to infrared. When combined, these filters will provide a spectacularly detailed view of the cosmos over time. The camera will snap a picture every few seconds, and will be able to photograph the whole Southern Hemisphere sky every couple of days.

Who was Vera Rubin?

Vera Rubin was the first astronomer to share convincing evidence for the existence of dark matter. Dark matter is one of the great mysteries in astronomy. All the light we see in the universe is ordinary matter, and it makes up just 5% of our universe. But 27% of the universe is a mysterious substance scientists call dark matter, and the remaining 68% is a mysterious force called dark energy. One of the major goals of the Rubin Observatory is to unlock the mysteries of dark matter and dark energy.

What will this telescope help us see?

The observatory will be useful for understanding dark matter, but it will also be able to spot a number of other things. The telescope's ability to capture the whole night sky, several times a week, will allow researchers to view rare objects that were previously only captured by chance. These include stars that explode as supernovas, or quasars that send out regular pulses of energy across the universe like clockwork. A particular area of interest is gravitational lensing: where the gravity of objects can warp and magnify light coming from more distant objects. The telescope's huge lens will also capture very faint light, allowing researchers to see distant large-scale objects. The observatory will be able to spot many more asteroids, comets, and other close Solar System objects than any previous telescope. In addition, it should be able to spot supernovas just before they explode, so we can catch them in the act. These are just a few of the marvels that await us.



*The Vera C. Rubin Observatory is at Cerro Pachón in Chile. Venus sparkled as Comet C/2023 A3 Tsuchinshan-ATLAS began to set behind the observatory.
Image via H.Stockebrand/ [RubinObs](#)/ NOIRLab/ SLAC/ DOE/ NSF/ AURA.*



*The 3,200-megapixel camera will be connected to the Simonyi Survey Telescope inside the observatory.
(Supplied: Jacqueline Ramseyer Orrell/SLAC National Accelerator Laboratory)*

YOUR ASTRO QUESTIONS



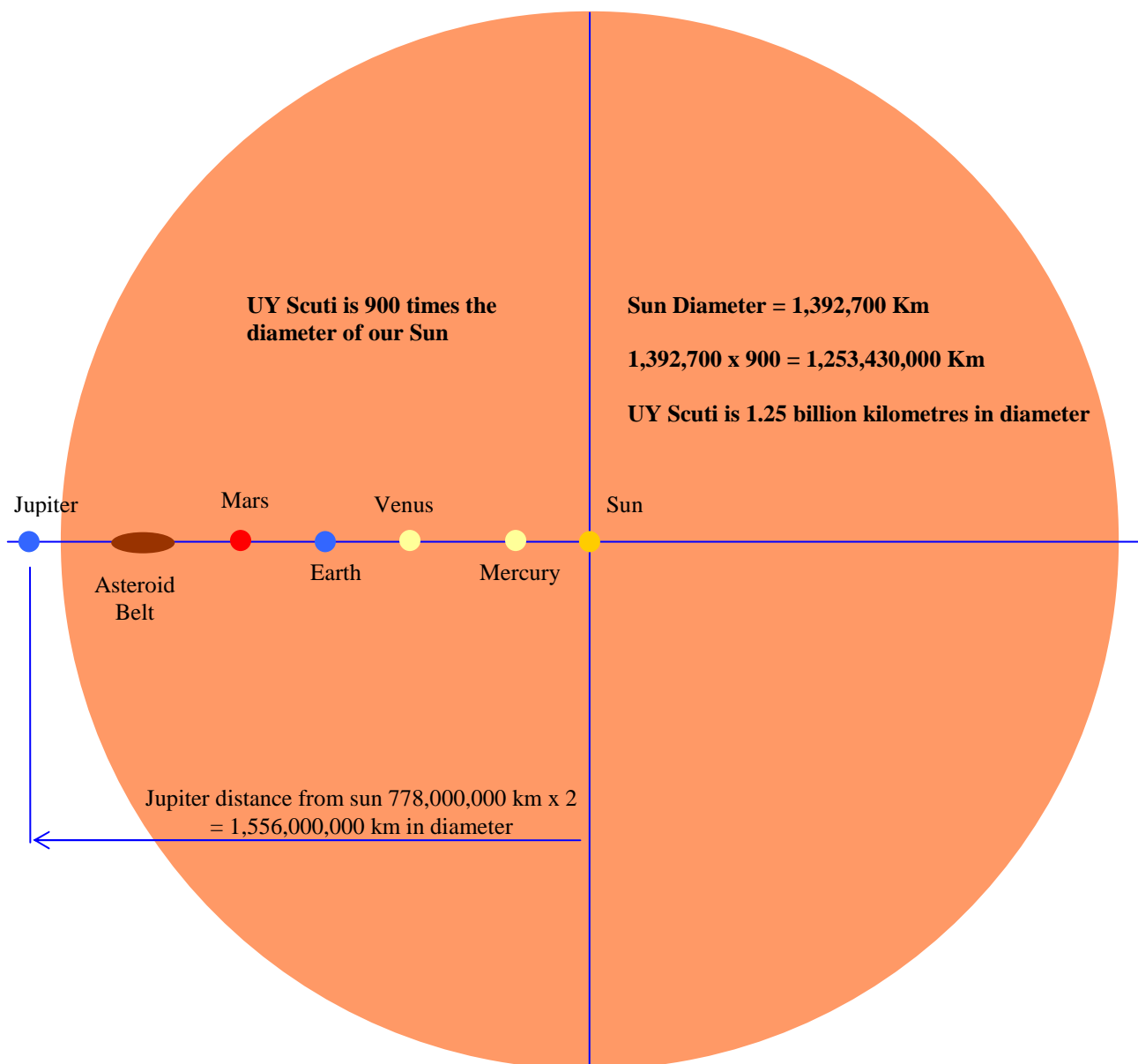
How big do stars get? *by Greg Walton*

UY Scuti is one of the big stars we know, at 900 times in diameter than our sun. If UY Scuti were placed where our sun is, it would just fit within Jupiter's orbit; all the rocky planets and the asteroid belt would be inside UY Scuti.

UY Scuti is within our Milky Way Galaxy, at 5,900 light-years from Earth in the constellation of Scutum. It's a variable star changing in brightness from 8.3 to 10.5 magnitude. UY Scuti is thought to be a binary system, with material being shared between the 2 stars which causes a change in their brightness.

How did UY Scuti get so large?

UY Scuti has about 9 times the mass of our sun. Its large size is because UY Scuti is a red supergiant close to the end of its short life. UY Scuti is burning through its hydrogen at an ever-increasing speed; and gravity isn't strong enough to hold the star together. Meaning UY Scuti has a very low density for its size.



There are other contenders for the largest star, but yet to be confirmed.

Stephenson 2 DFK 1 - A red supergiant star in the constellation Scutum with an estimated radius of 2,150 times the sun. However the exact size of some of the largest stars is difficult to determine because they are obscured by dust and gas.

WOH G64 - A star in the Large Magellanic Cloud with an estimated radius of 1,540 times the sun.

NML Cygni - A hypergiant star with an estimated radius between 1,183 and 2,770 times the sun.

VY Canis Majoris - A red hypergiant star in the Canis Major constellation.

MEMBERS GALLERY



Right -

IC 2944 aka The Running Chicken Nebula

Below is the SNR G296.1-00.5 to the right inside the circular ring of nebulosity is IC 2966

This is 4 panels of images each 3 hours long so about 12 hours of HOO and 12 hours of SO using the Optolong L-Ultimate and the Askar D2 SO filter so a total of 24 hours

Acquired over many nights using the Juwei 17 Harmonic mount
ZWO ASIAIR Pro for planning and acquisition
ZWO ASI 2944mc Pro camera
Stacked and joined together in Astro Pixel Processor
Processed in Pixinsight and Photoshop.

By Nik Axaris



Right -

A further edit to the Running Chicken (IC 2944) and the SNR G296.1-00.5 to the left of the Chicken 2 panel Mosaic for a total of 10 hours both 5 hours per filter exposed.

ASI294 MC Pro.
ASIAIR for capture
Juwei 17 mount
Optolong L-Ultimate filter
Askar D2 SO filter
Askar FRA300 scope

By Nik Axaris



Right -

NGC6188 our Fighting Dragons of Ara

23.5 hours of data collected using the Optolong L-Ultimate filter (137 x 300 secs) and the Askar d2 SO filter (157 x 300)

Askar FRA300 scope
Juwei17 harmonic mount
ZWO 294mc pro
Stacked with Astropixel Processor processed in PixInsight and Photoshop
Melbourne Bortle 6 skies.

By Nik Axaris



Right -

LMC using ZWO ASI2600MC PRO on Redcat51 using CAA 5 x 180sec, no processing (basic phone editing), live stack; love how it's almost black and white. Sometimes less is more.

By Sylvie Grandit

**Left -**

THE RUNNING CHICKEN IC2944 – taken with S50 Seestar – mosaic 453 x 10sec stacked images just processed via phone editing will have a crack at PixInsight etc – it's kind of weird my photo image is quite sharp and focused but as I'm writing these appear to be a bit blurry mmmmm

By Sylvie Grandit

**Right -**

I was having a very disappointing night last night, trying to use my Seestar S50 in EQ mode with 20sec setting but having a majority of frames dropped. The same issue across 3 separate targets (Sombrero Galaxy, Cats Paw and Eagle Nebula). I gave up on those at 430am, about to pack it in when I thought maybe one last look at Sky Atlas. I dropped it down to 10secs and gave it a go. So happy I did! Not a single frame dropped!

NGC 7293 Helix Nebula

120 mins x 10 secs

Denoise and slight editing in Seestar app

Slight dehaze in Lightroom Mobile

Bortle 4 sky from my driveway in Rosebud

By Michelle Sykes



Right -

At the beginning of last nights PVN, we were streaming a view of M83 – The Southern Pinwheel galaxy, from the telescope in the dome to the projector display in the main room before the talk began.

M83 almost fills the frame at the focal length of the C11, so the image barely needed any cropping. To the top left* of M83, 2 more distant galaxies can also be seen.

I saved the files from the session, stacked the best 105 of them, and processed them for this result.

Imaged 2/5/2025 at MPAS.

M83. The Southern Pinwheel Galaxy.

Celestron C11.

UVIR Filter.

ASI294 MC Pro. ASIAIR for capture.

105 x 30 Sec (52.5 Min total)

DSS for Stacking. Siril to process.

By Chris Kostokanellis

**Right -**

This is B228, The Dark Wolf Nebula in Lupus.

Not a particularly good capture or process of it by any measure, especially from Bortle 5 (at best) skies of my backyard, but I'll use it as a benchmark for future attempts.

Barnard 228 is an active star-forming region with a high number of very young T-Tauri stars similar in mass to our sun.

This is 400 min with the Antila Triband filter, my Sharpstar CF80 refractor (which is still playing up on the bright stars), 0.8 Flattenor / reducer, and ASI294 MC Pro Camera. A combination of 300 sec and 600 Sec exposures, stacked with Dark frames only in ASTAP, and processed in Graxpert and Siril.

By Chris Kostokanellis

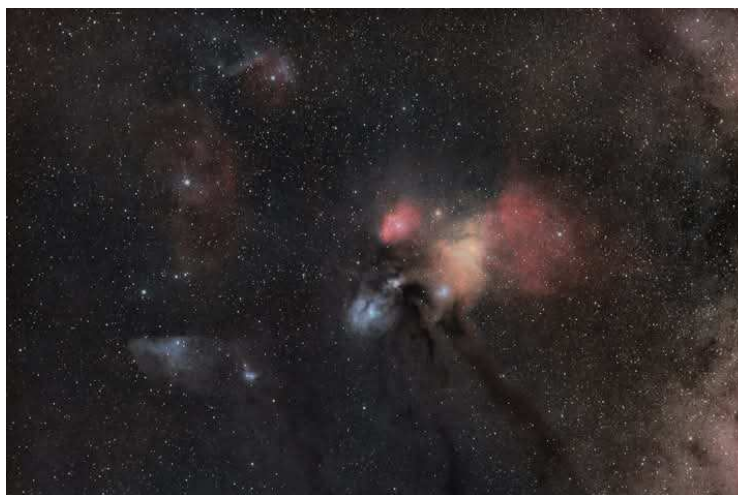
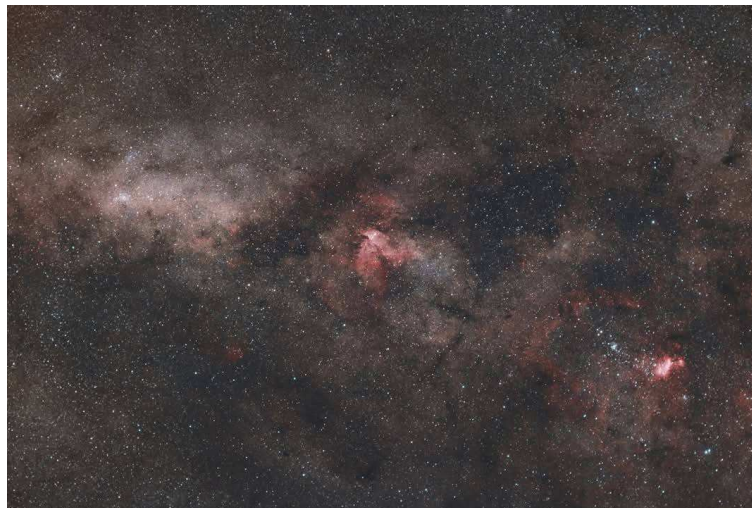
**Right -**

Rho Ophiuchi Cloud Complex

The Heart of Scorpio, Antares is the bright yellow star at centre, and the Scorpion's head and claws are to the left, the glow of the Milky Way is to the right.

AS1294MC Pro, Antila Triband and 50mm Nikon lens @ f/4. On my AZGTi Tracker. 35 x 2 Minute frames

By Chris Kostokanellis

**Left -**

NGC6188 - Rim Nebula (fighting Dragons) centre of frame, IC 4628 - The Prawn Nebula at the bottom left.

AS1294MC Pro, Antila Triband and 50mm Nikon lens @ f/4. On my AZGTi Tracker. 16 x 2 Minute frames

By Chris Kostokanellis

Right -

This is RCW 85, also known as the Devils Tower. It's a hydrogen emission nebula and star-forming region, and sits between the 2 pointer stars to the Southern Cross, Alpha and Beta Centauri.

At around 5,000 LY away, the nebula is estimated to be around 100 LY across.

110 minutes (22 x 5 min) imaging, 80mm refractor, Antila Tri-Band filter and ASI 294 MC Pro camera, from my backyard on 20th and 23rd April.

The Stellarium screenshot shows the location and approximate FoV.

Chris Kostokanellis

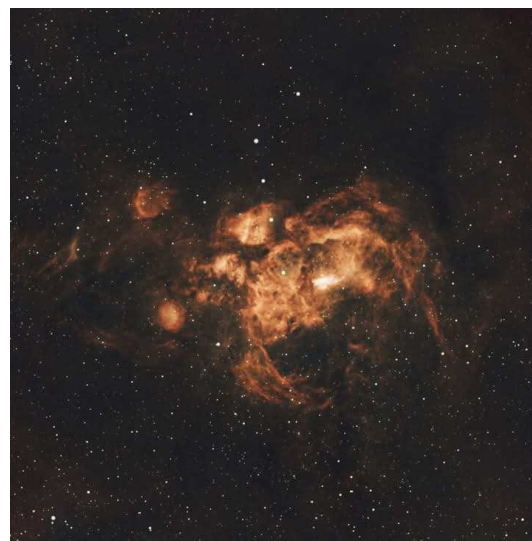
**Right -**

NGC 6357. Lobster Nebula in Scorpius.

25 x 5 min frames with the Optolong L-Extreme filter.

Processed in DSS and Siril.

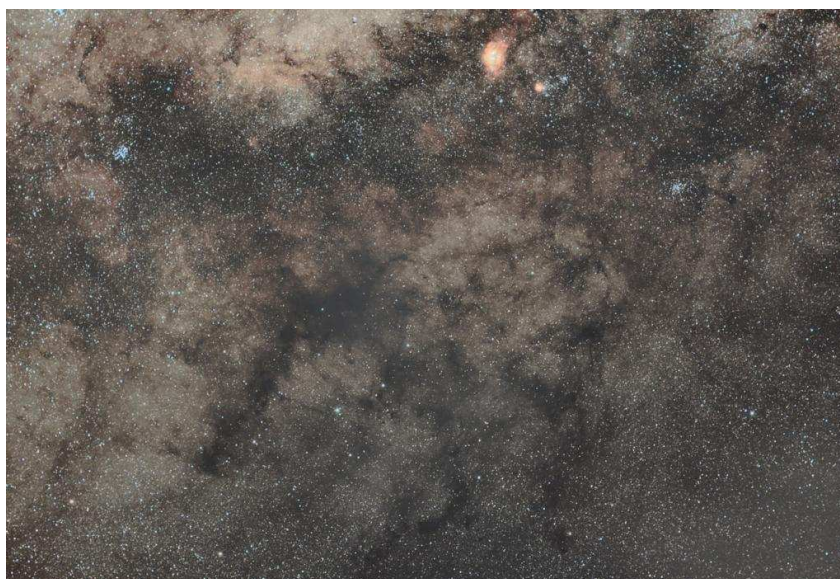
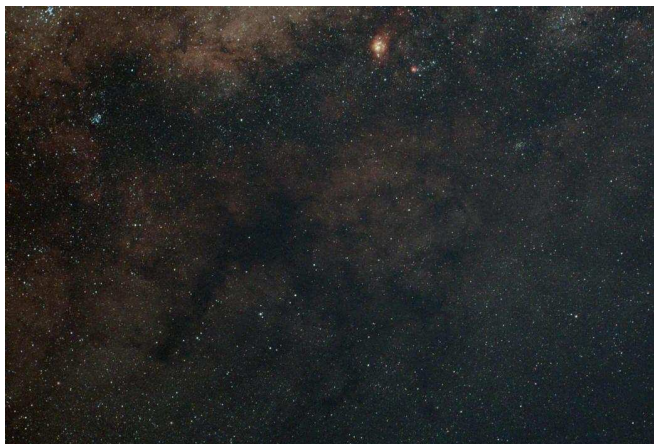
By Chris Kostokanellis

**Below -**

My processed shot of the Galactic Kiwi, from the Winter Solstice at the Briars last night.

This is a stack of 19 x 2 min frames shot with my ASI294MC Pro, and a 50mm Nikon lens at f/4, tracked using my AZGTi mount. (I probably should have gone f/5 to further tame the seagulls).

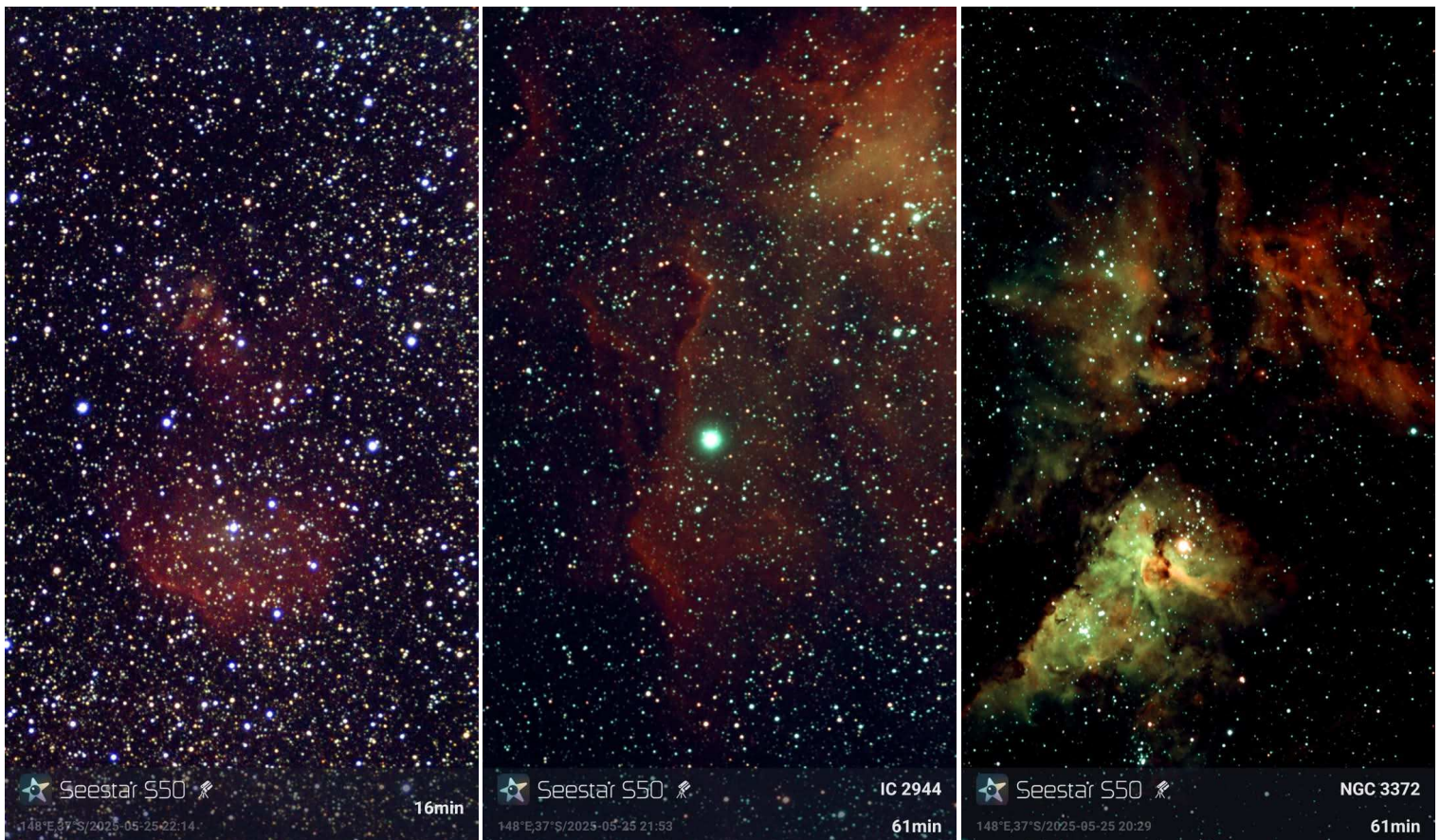
By Chris Kostokanellis



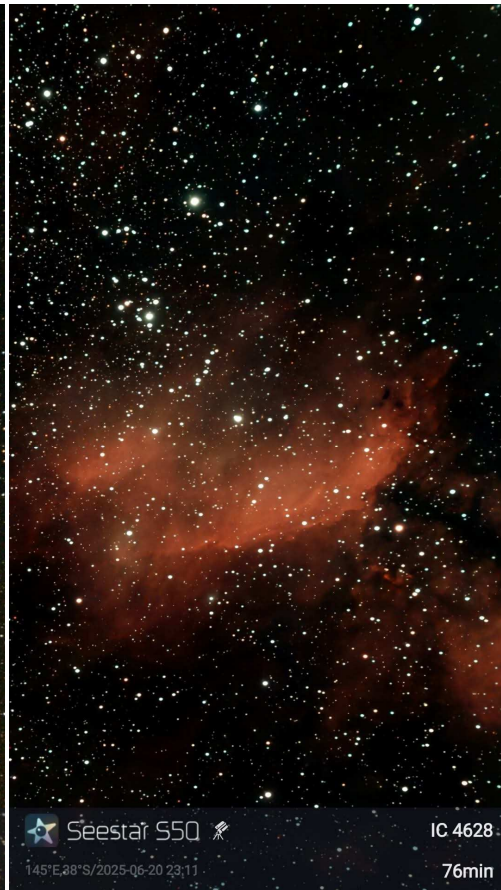
Below - It never ceases to amaze me the details we can image, even in a highly light polluted backyard like mine.
One of these images is the Southern Pinwheel Galaxy, which is 15 million light years away, the mind boggles.
By Dennis Cooke



Below - While camping at Lakes Entrance, the skies are much clearer even with the caravan park lights.
By Dennis Cooke



Below - It was a clear night in Melbourne last night so I thought I'd have a bit of a practice for tonight at MPAS, by *Dennis Cooke*



Right -

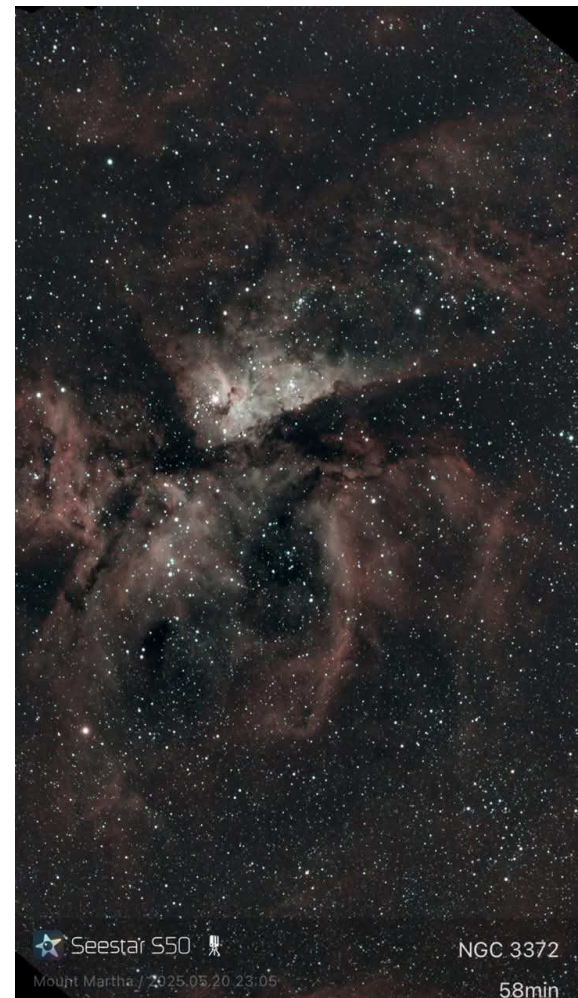
Carina Nebula NGC3372, 58 minutes exposure. Imaged with Seestar S50 using newly added Mosaic software.

By Mark Stephens

Below -

NGC6193 open cluster -Seestar -193 x20 sec, only used AI denoising feature on Seestar, not yet processed

By Sylvie Grandit

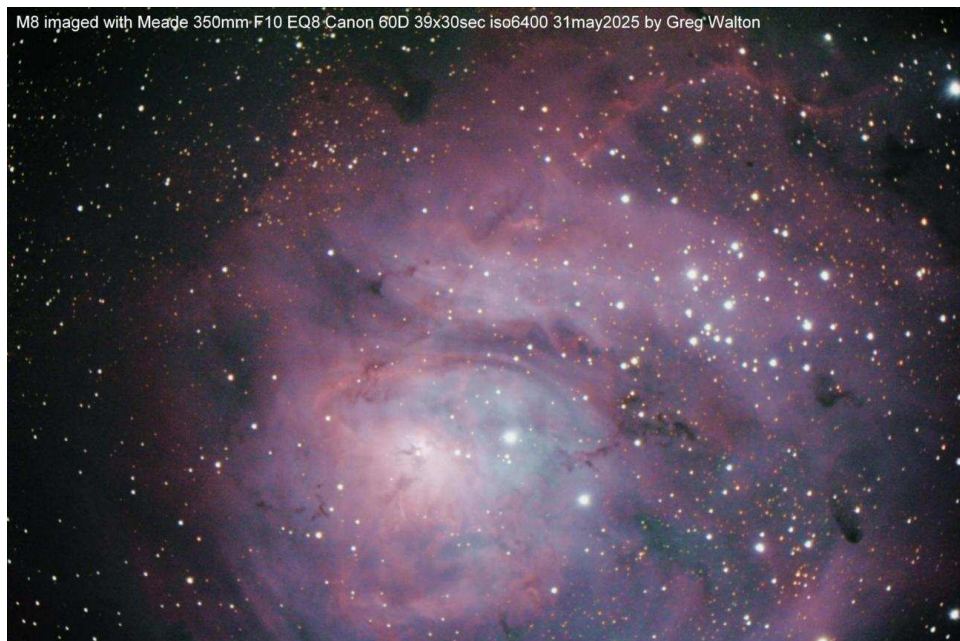


Right -

M8 Lagoon Nebula imaged with the 350mm Meade in the MPAS observatory.

39 x 30 second exposures at ISO 6400, stacked and contrast adjusted with DeepSkyStacker.

By Greg Walton

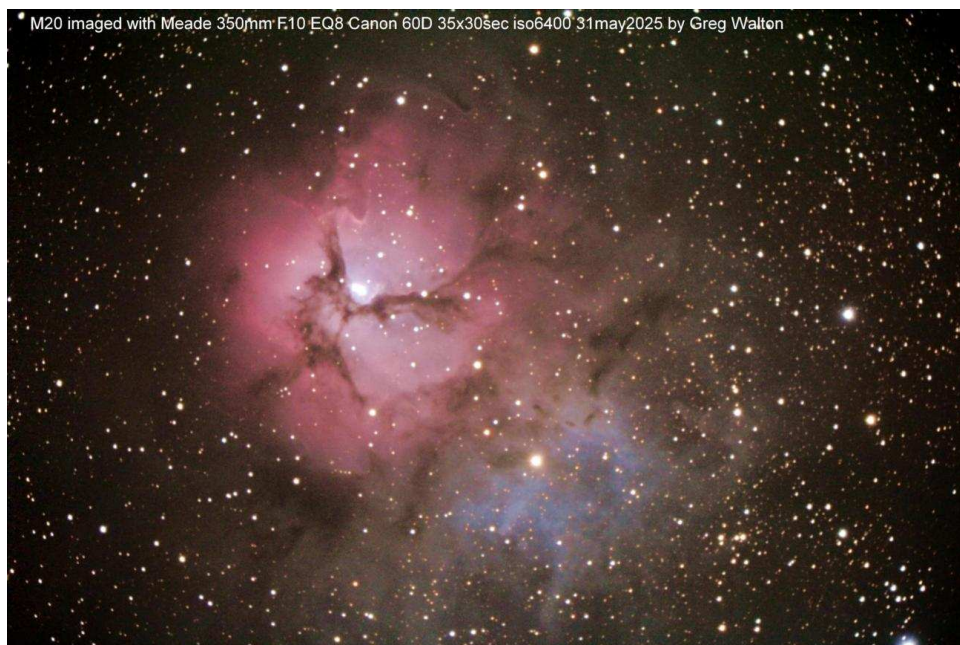


Right -

M20 Trifid Nebula imaged with the 350mm Meade in the MPAS observatory.

35 x 30 second exposures at ISO 6400, stacked and contrast adjusted with DeepSkyStacker.

By Greg Walton



Right -

NGC6164 Nebula imaged with the 350mm Meade in the MPAS observatory.

21 x 30 second exposures at ISO 12800, stacked and contrast adjusted with DeepSkyStacker.

By Greg Walton



MO PHO CHALLENGE

Chris Kostokanellis



Astro Mo Pho #24 March – May 2025 - “Earth and Sky”

The last challenge ran over 2 months, and as you can probably guess by the title, images needed to capture both the Earth and sky in the photo.

Although generally a wide field challenge, Liam Laube was able to capture a haunting photo from McCrae Beach of the moon rising behind the Arthurs Seat Comms tower using a 5” Newtonian. These photos require some planning, in knowing when and where the moon will rise, and where exactly you need to be to capture the shot. Although I’m sure Liam was hoping for a clear evening, unexpected clouds made for a unique photo.

We had two significant full moons during this challenge. May saw the “Flower Moon”, which is so called as it is the full moon around the time many flowers are in blossom in the Northern Hemisphere. In June we saw the “Strawberry Moon”, which is the full moon around the time Strawberries are ready for harvest in the Northern Hemisphere, and nothing to do with the appearance of the moon, although Dave Rolfe did manage a “Strawberriesque” photo of it, with some processing assistance by me.

Several time lapse videos were also submitted for this challenge, and the clouds passing by make for terrific atmosphere. These can all be seen in the summary video linked below.

15 members captured photos, time lapses and star trails with the Earth and sky in shot, so this summary is a little longer than usual. Grab a drink, turn up the volume, sit back and enjoy the show.

https://drive.google.com/file/d/1jXMv61qv0T5PiYRjoMp44gO2sneHLIS_/view?usp=drive_link

Well done everybody. Chris Kostokanellis.



Above and Right -

11th June.

Target = Arthur’s seat comms towers
@2,070meters.

Image taken from McCrae Beach.

5 inch Newtonian 650 f/l

ISO settings through the roof at 16000 @1/30

The moon with the naked eye was almost invisible.

The timing and location window for the shot was un-editable, and the only cloud in the sky managed a quick photo bomb and then moved away shortly afterwards.

By Liam Laube



Right - This is a capture of Orion's Sword between the trees from my backyard, taken earlier this week. Single untracked shot with my Canon 700D, 96mm FL, f/5.6, ISO 6400, 4 Sec. Siril for processing using the integrated GraXpert background extraction and denoising.

By Chris Kostokanellis



Left - Scorpius rising over MPAS at the Briars this evening. Canon 700D, Sigma 10-20mm @ 10mm f/3.5 20 Sec single exposure, ISO 3200.

By Chris Kostokanellis

Below right - Crescent Moon over Seaford Beach

By Chris Kostokanellis

Below -

We stopped overnight at Marlay Point near Sale on our way to Lakes Entrance. While I was out with the S50 the moon came up over the lake, the only other time that I'd seen a stairway to the moon was in Broom, so I gave it a shot on standard settings with my Samsung A13. Not a great shot but it captures the concept.

By Dennis Cooke



Right - My first MoPho go, Sagittarius rising over MPAS observatory. *By Mark Stephens*

Below - Aurora - 1st June 2025

Some colour among the clouds.

Imaged with my iPhone from Langwarrin.

By Mark Stephens



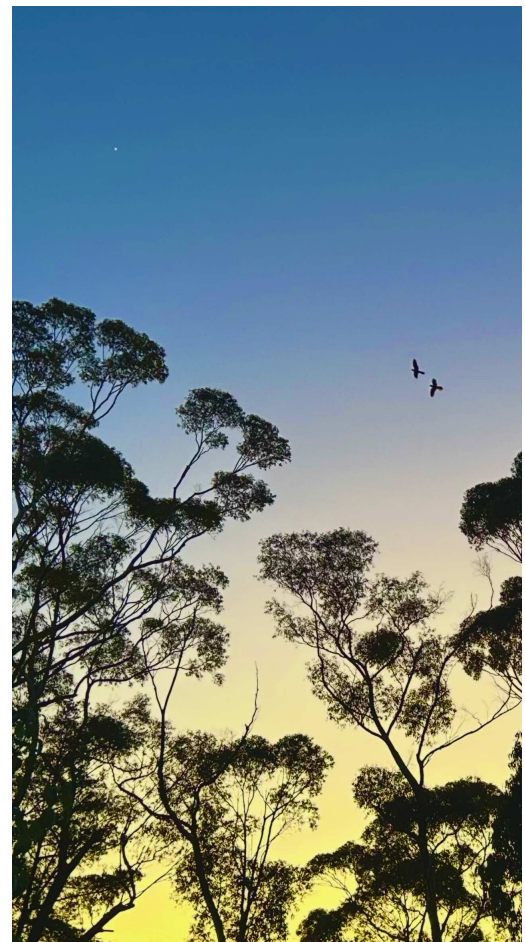
Right – 25/5/2025 - Black Cockatoos Flying to Venus.

Yellow-tail Black Cockatoos sometimes visit Mt Eliza at the start of winter. These two were part of a much larger, and noisy flock visiting early on a clear morning with Venus rising. I was doing some spectroscopic measurements of Venus when I noticed them and pulled out my iPhone. Camera : iPhone

Processing: Saturation increase, lower black point (iPhone). *By Fred Prata*

Below - My first MoPho challenge, the Moon rising between goal posts.

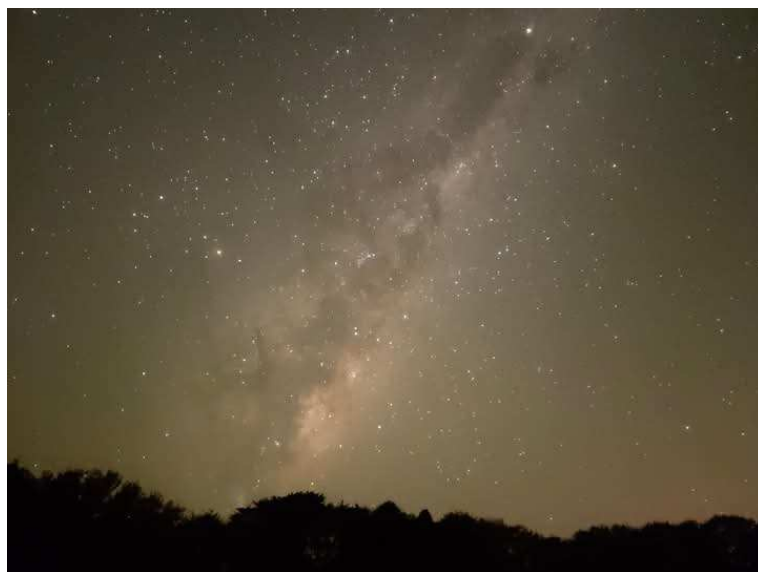
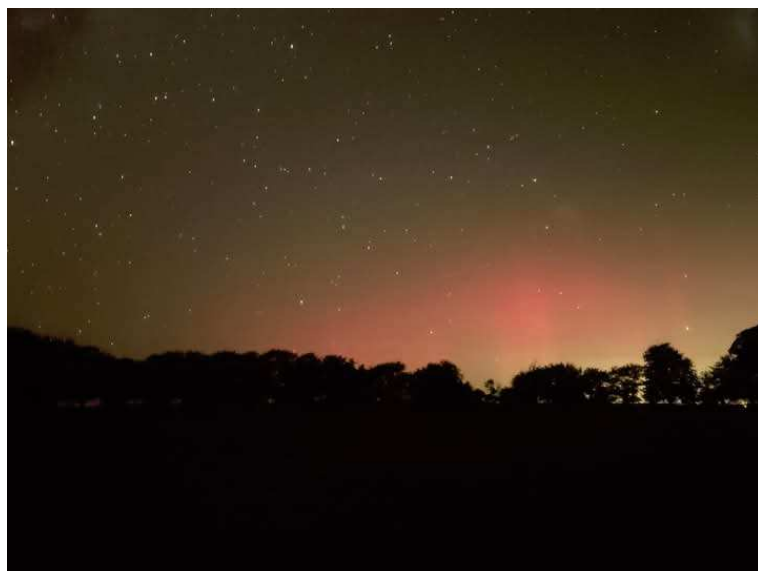
Imaged with my mobile phone. *By Pia Pedersen*



Below 2 images - Straight off my phone and unedited. At the ASNSW dark sky site in the middle of nowhere (about 4 hours west of Sydney). Samsung Note20 Ultra, 20 secs @ ISO1600. *By Nerida Langcake*



Below 4 images - We had a mini star party on with scope buddies. Got to see aurora activity as a bonus. Highlight was definitely the aurora and galaxies in Virgo and Coma Berenices. *By Mel Lee*



Below - The Aurora from my driveway in Rosebud tonight 2nd June.
Also Time-lapse and Star Trail video, plus a couple of photos can be seen on the MPAS Facebook page.

iPhone 14 Pro - 482 x 30sec between 20:13pm to 00:41am.
Native camera and Lumilapse intervalometer, stacked in Star Stacker app.
Video put together and speed tweaked using iMovie app.

There was some great colour there at the end....until the clouds rolled in. *By Michelle Sykes*



Photo 1 was 21:15pm

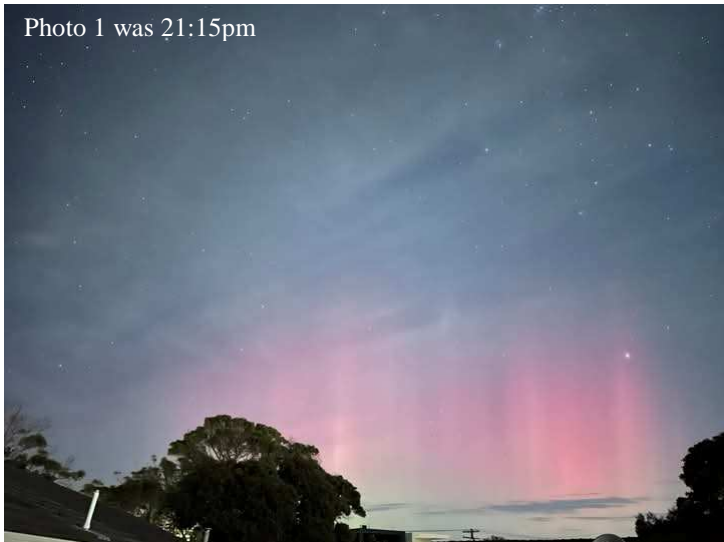
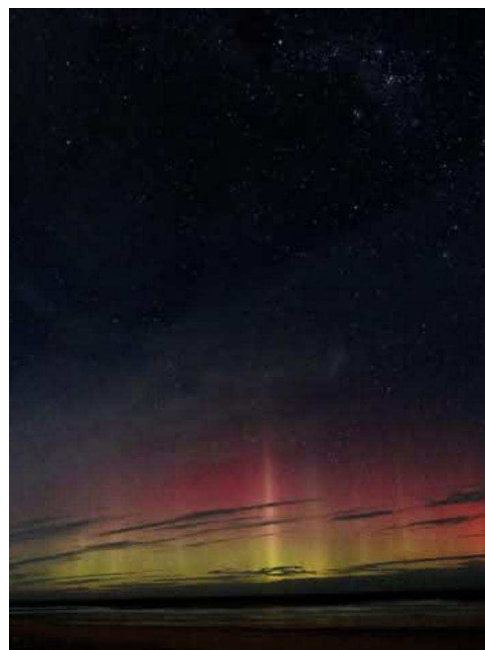
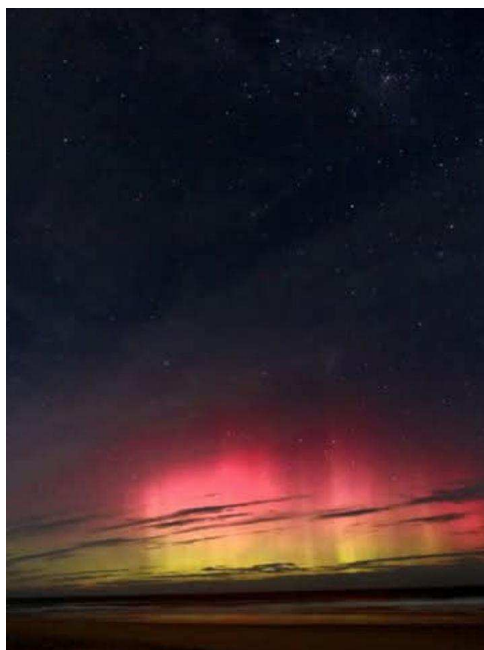
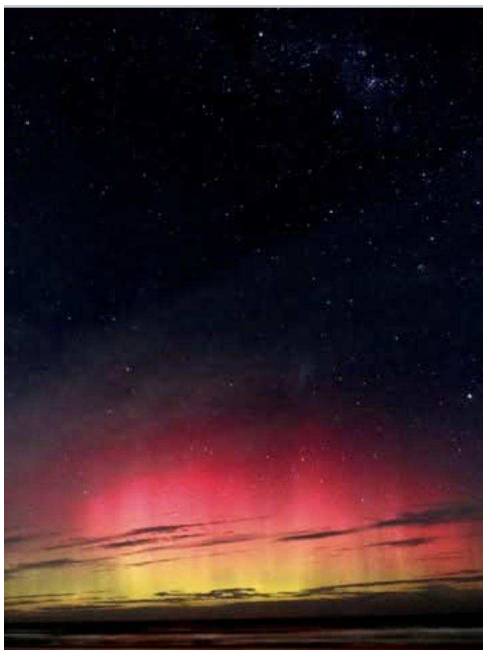
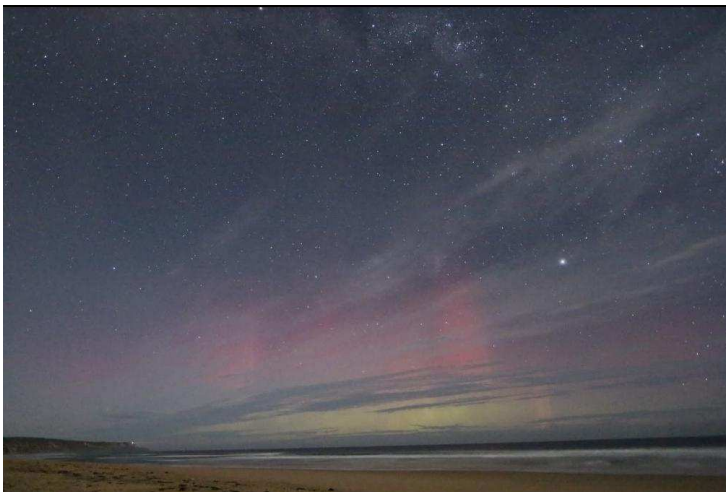
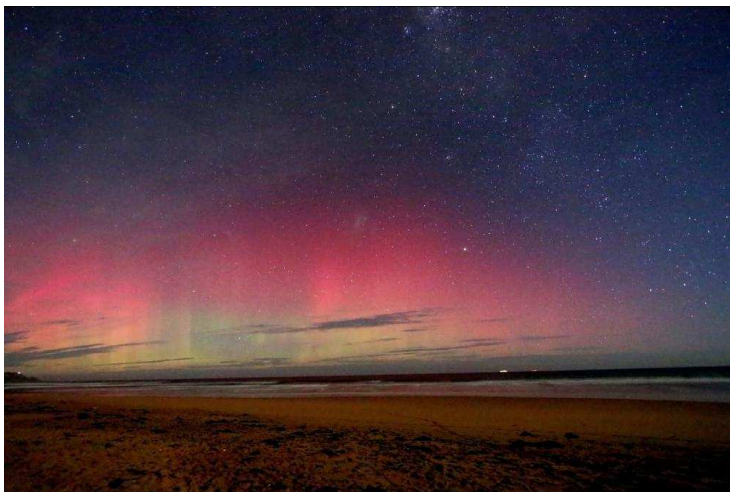


Photo 2 was 23:50pm



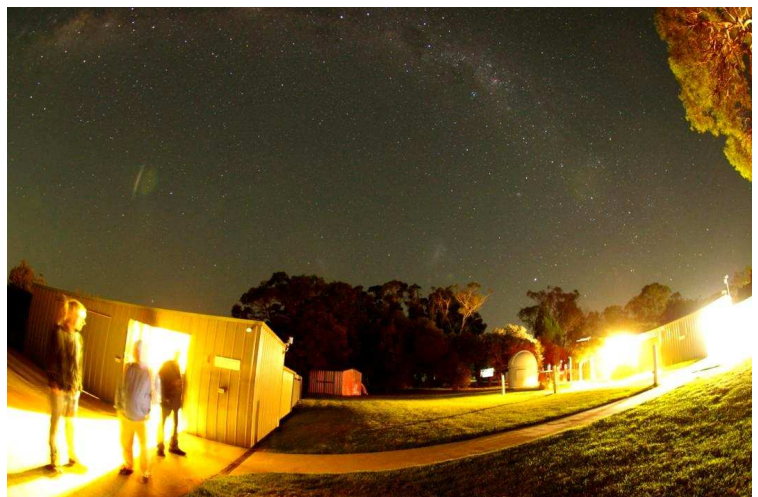
Below 5 images - Monday 2nd of June at Gunnamatta Beach taken over 3 hours with the moon still out. *By Steve Gercovich*



Below - 10mm lens panning left time-lapse at LMDSS, by Greg Walton - YouTube Link: https://youtu.be/Cc7_yn5CqYk?si=ru6rt0-SiR-Fngtj

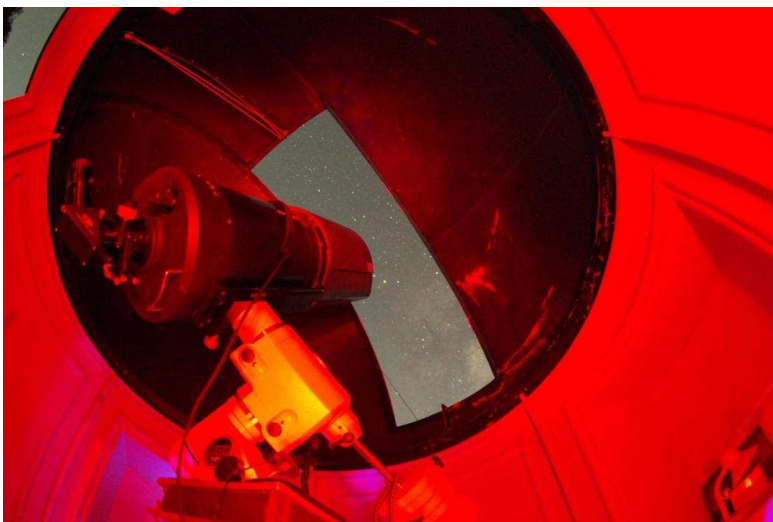


Below 4 images - MPAS public viewing night time-lapse YouTube link - https://youtu.be/qD_qE8sBPk4?si=JFnFhuyg7SLUMfao
Camera Pentax K-x with 10mm Sigma f2.8 Lens - 30 seconds @ ISO1600, By Greg Walton

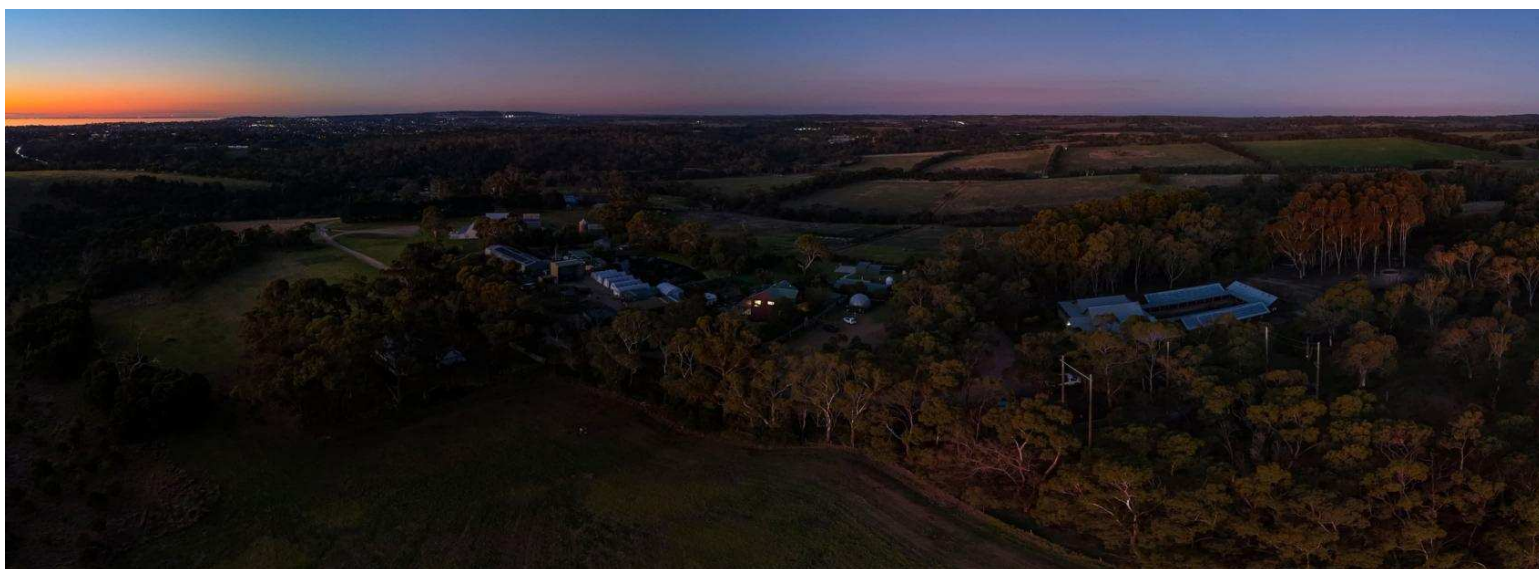
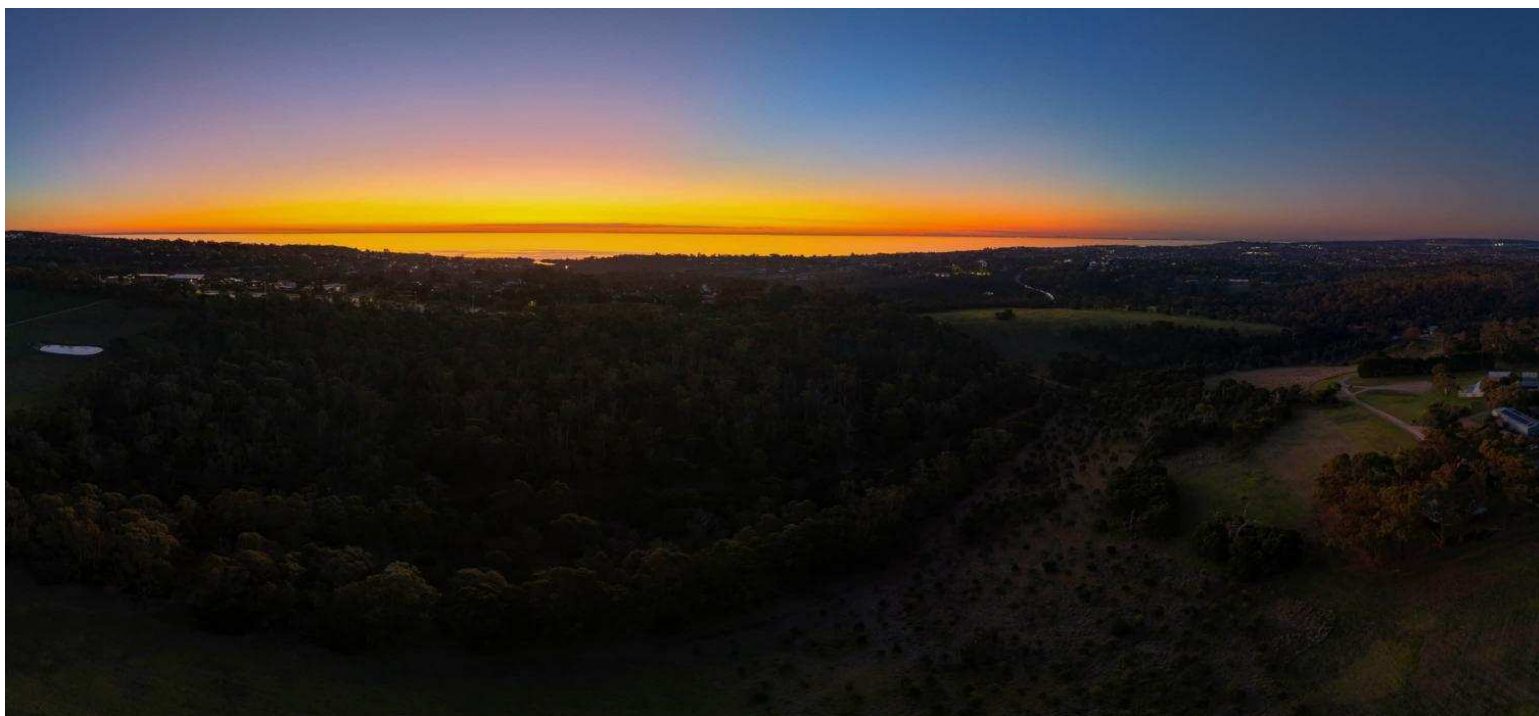


Below 5 images - MPAS observatories and site imaged on 20th May 2025.

Camera Pentax K-x, lens 10mm Sigma f2.8 - 30 seconds @ ISO1600, by Greg Walton



Below - Couple of shots of the Briars tonight with my drone, would've been a great night for a public night! *By Ben Claringbold*

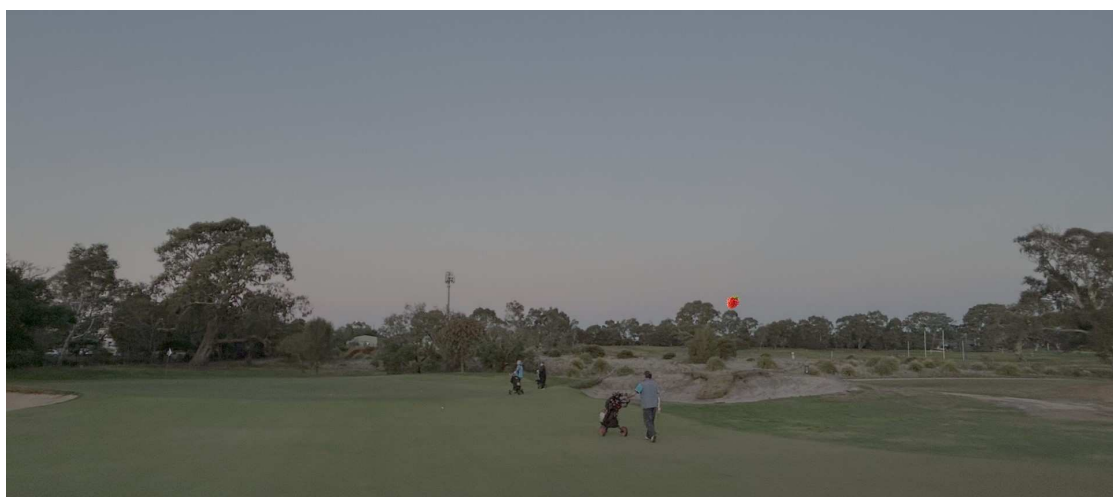


Right -


11/6/2025
Golf under a Strawberry Moon.

By David Rolfe

*Strawberry Processing
by Chris Kostokanellis*



New Astro Mo Pho Challenge #26.



Mornington Peninsula Astronomical Society

**ASTRO
MO-PHO**

MONTHLY PHOTO CHALLENGE

New Challenge. June - July 2025:

MPAS




Photo: Nik Axaris

Vs

Hubble and JWST




Photo: JWST NIRCам. NASA, ESA, CSA, STScI

Our next challenge is MPAS vs Hubble and JWST.

For this challenge, we'll be comparing our images with those taken by the 2 great space-based telescopes.

For this challenge, the photos don't need to have been taken during the challenge period, although it's more fun if they are, so feel free to go through your archives.

You will need to send in or post your image along with the Hubble / JWST image you are comparing with, and even though most NASA images are free use, please credit the images appropriately.


A good place to start for inspiration is NASA's own Hubble Challenge:

<https://science.nasa.gov/mission/hubble/science/explore-the-night-sky/hubbles-night-sky-challenge/>

Monthly target ideas are posted on the site.

Thanks to member Brian Stephens who posted about this a couple of months ago on the E-Scorpius forum.

Clear skies. Chris Kostokanellis



Mornington Peninsula Astronomical Society

**ASTRO
MO-PHO**

MONTHLY PHOTO CHALLENGE

Criteria for this challenge.

- Submit your capture of a Hubble or JWST imaged object.
- No date criteria, so feel free to go through your archives.**
- Submissions must be accompanied by a JWST or Hubble image for comparison.
- Wide field images must include a mark up of the relevant object(s)
- Remember to appropriately credit the JWST or Hubble image.

Submit photos to any of:

- MPAS Members Facebook page
- E-Scorpius Members. Subject "Astro Mo Pho"
- Email: c.kostokanellis@mpas.asn.au


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Hubble's Night Sky Challenge

Celebrate 35 years of Hubble observations with a yearlong night sky stargazing adventure for amateur astronomy enthusiasts.



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)

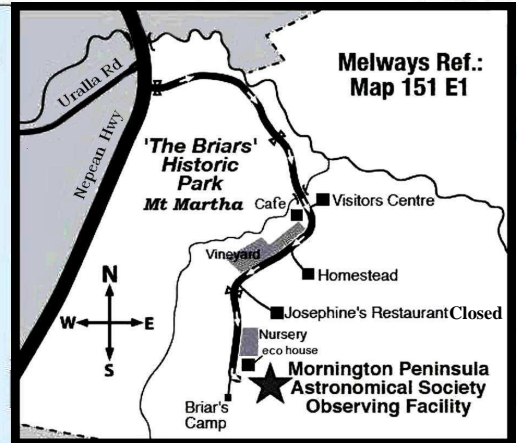
Society meetings: Don Leggett Astronomy Centre
 8pm on the third Wednesday of the month
 (except December)
 (See map at right & Below)



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

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.



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 gwpas@gmail.com

MPAS newsletters online - https://drive.google.com/folderview?id=0ByvkxzZG19g_SUNmZVhkZTFGWTA

SCORPIUS The journal of the Mornington Peninsula Astronomical Society

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