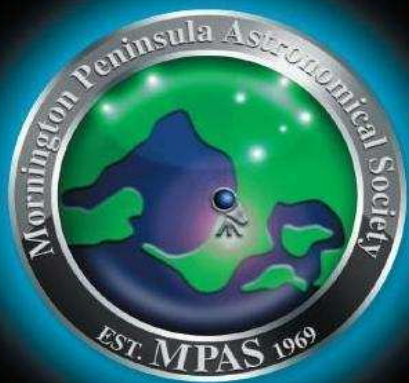


Cover image - Christmas Tree Cluster and Cone Nebula (NGC 2264).
By Guido Tack



SCORPIUS

THE JOURNAL OF THE
MORNINGTON PENINSULA ASTRONOMICAL SOCIETY INC.

Reg No: A268 ABN: 34569548751 ISSN: 1445-7032

Vol. XXXIII, No. 1 (January / February) 2024

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



SOCIETY NEWS



School viewing Night October 29th - Strathmore Girls Baptist Grammar had 32 Year-10 students at Merricks Camp on Tuesday evening. The talk indoors was given by Katherine McCoy and Peter Skilton, with lots and lots of questions, which was impressive given the girls spent the day kayaking at Pt. Leo and would probably have been very tired. Following the talk, telescopes were shown to the attendees indoors by Chris Kostokanellis, Phil Peters, Nerida Langcake and Steve Lomax. Steve made his MPAS debut at this outreach night as a recent new member and brought along his nicely polished 8-inch white Dobsonian ready to use.

Unfortunately, outdoors it was drizzling with only very small patches of thinner cloud such that the Moon shone through the cloud layer only intermittently. Nevertheless, one teacher and a couple of hardy students persisted until they were able to see the Moon briefly and even tried their hand at capturing a picture of it on their phone held up to the eyepiece, under Phil's expert guidance. Apparently the night before had been beautifully clear skies at the campgrounds. Oh the difference 24 hours can make.

Despite the weather, they all seemed very happy with the experience. *Regards, Peter Skilton*

Public Viewing Night November 3rd - The November public stargazing night at the Briars started with horizon to horizon cloud and no doubt contributed to only 58 visitors turning up (we had over 100 booked). Those who did come, heard Trevor Hand speak about Saturn using the planet and moon models that he constructed some time ago, and which are always very popular. During the presentation, there was some drizzle outside, necessitating closing the main observatory roof.

Following the talk, everyone moved outside. The 2024 Astronomy almanacs had arrived and were for sale on the night, with plenty being sold while stocks last. As the cloud was very slow moving and still under total cover, the majority then left with a rain check for next month after having a tour of the facilities. For the more optimistic at heart, amazingly the skies magically cleared by 10pm, enabling the roof to be re-opened and some good observing to begin.

Helping run the evening and operate the telescopes were Robin Broberg, Mark Stephens, Steve Lomax, Sophie Grandit, Peter Skilton, Simon Birch, Jamie Pole, Chris Kostokanellis, Simon Hamm, Fred Crump, Phil Peters, David Connet, Ben Claringbold and John Goodall. If any other member was missed, please remember to sign your name in the logbook next to the glass counter.

Regards, Peter Skilton

Society meeting November 15th - The meeting features Dr. Lindy Elkins-Tanton, Principal Science Investigator for the NASA Psyche Mission on the topic of "The NASA Psyche Mission: An Electric Journey to a Metal World". This talk is hosted by the National Academy of Sciences. Also covered were AstroMoPho by Chris Kostokanellis, then Sky for the Month plus recent tour of the NASA-CalTech's Jet Propulsion Laboratory, witnessing the launch of Psyche from Cape Kennedy, and other sights in Nevada including the Atomic Testing Museum by Guido Tack. The GOCE Gravity Mapping mission is shown in more detail as well this month.

We close with some of ESA's GAIA mapping mission's results showing the warp in the Milky Way's disc and its rotation with time relative to the Sun's orbit. This video compilation from ESA and [space.com](https://www.space.com) is set to the music of In Your Orbit by the Spanish anonymous composer Tubebackr.

You can also watch it here by clicking on this link and going to the most recent video on the channel: <https://www.youtube.com/channel/UCm6XOkIcIft4y0XRBXpXuW> or watch it on the MPAS site once it's refreshed for this month: <https://www.mpas.asn.au/meeting-recordings/> Regards, Peter Skilton



Working Bee & Members BBQ November 18th - Saturday saw another successful working bee with lots of jobs completed. Lawns were cut and edges trimmed. Clubrooms and observatory swept out and cobwebs removed, vacuuming also done. We packed up anything that won't be needed and moved to the shipping container, just to make more room and make the clubroom look a bit tidier for VASROC, which was held on the following Saturday.

Jamie bought supplies and ran the BBQ; he also made his famous pavlova. Members were also able to purchase the latest Astronomy 2024 almanac and calendar. After dinner as the sky was clear, we opened the observatory and viewed the Moon and planets Saturn and Jupiter. We also dragged out Big Blue, the Society's 8-inch refractor, which always shows pleasing views of the planets. Some members did some astrophotography using the Society's telescopes and their own equipment. The night finished up around 11:30pm.

Members that signed the attendance book were: Peter Lowe, Phil Peters, Lara Conway, Roland Knake, Jamie Pole, Mark Stephens, Simon Hamm, Chris Kostokanellis, Charlotte Swart, Ben Claringbold, John Goodall, Fred Crump and Bonnie, Edwin Ingles, Selissa Damor, Sam Healey, Liam Laube, Mark Reid, Donna Blackwood, and Greg Walton. Sorry if I missed your name, I'm sure there were a few members who didn't sign in.

A big thank-you to all who helped out on the day. The site, clubrooms and observatory all look fantastic. *Regards Greg Walton*



Panorama, By Greg Walton

By John Cleverdon



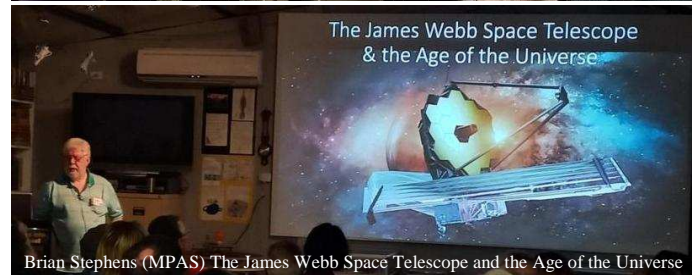
VASTROC 2023

The 19th statewide biennial Victorian Astronomy Convention (VASTROC) kicked off at the Briars on the morning of 25th November in quite hot conditions under a beating Sun and with some pesky flies also in attendance. Fortunately, there was plenty of Aerogard at hand and they kept out of the air-conditioned comfort indoors.

After the welcoming introduction by Peter Skilton, the first Chair of the day, Chris Morley, President of the Latrobe Valley Astronomical Society (LVAS), introduced Brian Stephens who spoke about the James Webb Space Telescope and the age of the Universe. Then Guido Tack took the audience on a journey through the Jet Propulsion Laboratory near Los Angeles, and showed just how badly beaten up the Martian rovers' metal wheels can become on the Red Planet. Then Judith Bailey from the Ballarat Astronomical Society (yes, that is spelled historically

right) took the microphone and took us to Lake Wendouree to share some of her active experiences with the light pollution there and interacting with local authorities about it.

During the lunch break of sandwich wraps, party pies, quiches and finger food, Sidereal Trading spoke indoors about what they offered in the marquee outside, and the PhD student volunteers from OzGrav presented about gravity waves, LIGO and merging higher mass stars towards the end of their system's lifetime.



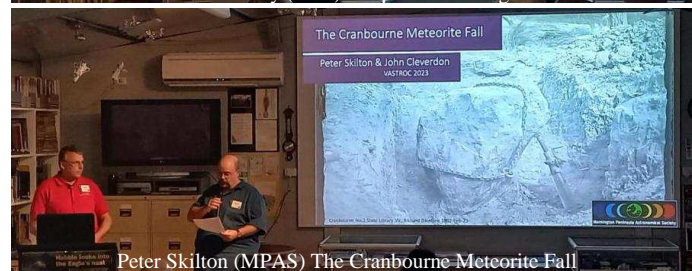
Brian Stephens (MPAS) The James Webb Space Telescope and the Age of the Universe



Guido Tack (MPAS) A Visit to Jet Propulsion Laboratory (JPL)



Judith Bailey (BAS) Keepers of the Night



Peter Skilton (MPAS) The Cranbourne Meteorite Fall



OzGrav

The second Chair, David Murton, Treasurer of the Astronomical Society of Geelong (ASOG), then introduced Peter Skilton and John Cleverdon who gave a talk about the latest update on the Cranbourne Meteorite fall, while John handed around a sectioned piece of the #9 fragment for the audience to see. This was followed by Paul Odgers from the LVAS all about the search for life on Mars. Coincidentally, Paul mentioned the late LVAS member, Ken Bryant, as being an inspiration for his involvement. Ken was also a very active MPAS member and, in fact, did the first library research into the background of the Cranbourne Meteorite with me. Kelly Clitheroe, Secretary of ASOG, then spoke about her experiences with light pollution and light shielding on the western side of the bay, which seemed to be getting traction. She handed around a produced postcard that is helpful in explaining the issues to folk unaware of the impact on others of their own lighting choices and behaviours.

By this time, a rain band had swept through with some noise for one of the speakers to contend with at the time, however, it cleared in time for afternoon tea and a possibility to look at the marquees set up on the upper slab and next to the shipping container. It was noticed that Phil Peters was quite wet from poking pooled water off the roof of the marquee for Sidereal Trading, explaining why he curiously changed clothes during the day.



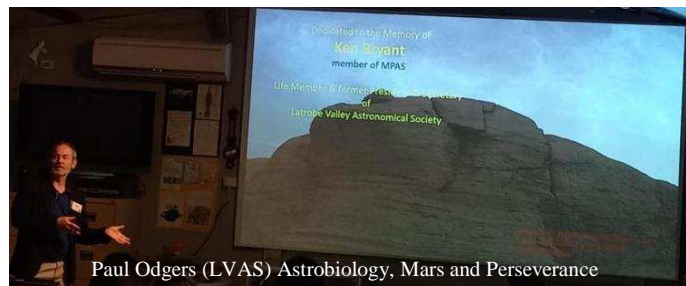
Following the group photo, everyone went inside where Chris Kostkanellis chaired the next set of talks, introducing Mark Iscaro, President of the Astronomical Society of Victoria, who spoke about using your smartphone on telescopes for astrophotography. Mark had to contend mid-talk with the strongest downpour of rain beating on the roof that we've witnessed in a decade, and a somewhat recalcitrant internet access to his slides. It was suggested by one wag in the audience that this was a sign because he didn't seem to like iPhones enough. Nevertheless, he soldiered through with the talk, plus finished on-time.

Next was Giulia Cinquegrana, who is doing her final year of a PhD in astrophysics from Monash University (MU) and spoke about nucleosynthesis and the formation of the heavier elements by stars. Madeleine McKenzie, a PhD student from the Australian National University in Canberra (ANU) then gave a barefoot overview and quiz about globular clusters and stirred up the audience by pointing out that Omega Centauri isn't a globular cluster as we've all been taught in the past, but rather is a nuclear star cluster that is probably a remnant from a past small galaxy colliding with the Milky Way. So now you know. She'd been caught in a downpour earlier and her shoes were sodden. And Maddie noticed that we shamefully didn't have a single photograph of a globular cluster displayed on the wall anyway. Oops.



Next, the chairs were packed up and in a jiffy the auditorium was transferred into a dining room. Everyone lined up for their roast dinner and dessert and ate the meal sitting down in style. Trevor Hand spoke about meteorites over dinner, with many highly valuable samples on display that he doesn't normally bring to public talks. After that, abracadabra, the tables were put away and the chairs were out once again.

Peter Skilton then introduced the keynote speaker, Dr. Brad Tucker who'd just flown in from the ANU after the earlier storm had threatened to waylay him in Canberra.



Paul Odgers (LVAS) Astrobiology, Mars and Perseverance



Kelly Clitheroe (ASOG) Dark Skies - A Practical Approach



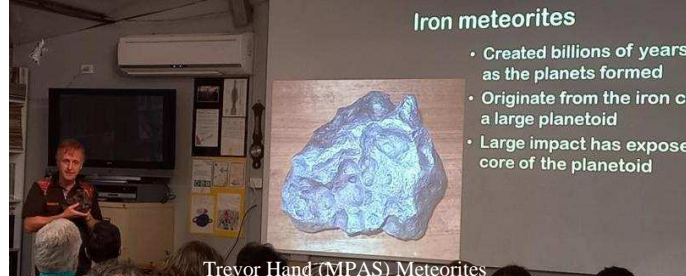
Mark Iscaro (ASV) Astrophotography



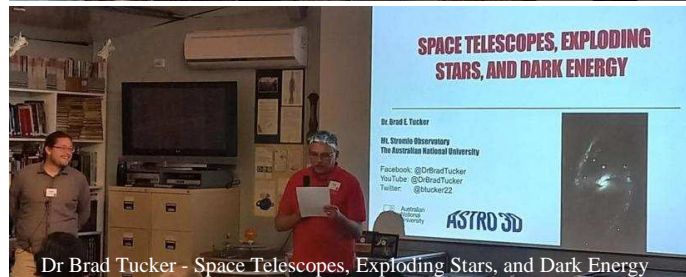
Giulia Cinquegrana (Monash Uni) From Hydrogen to Uranium



Madelene McKenzie (ANU) An Overview of Globular Clusters and Other Dense



Trevor Hand (MPAS) Meteorites



Dr Brad Tucker - Space Telescopes, Exploding Stars, and Dark Energy

Fortunately, that didn't happen and, wearing his signature shorts and thongs, Brad spoke most enthusiastically about space telescopes, supernovae, and dark energy. There were many questions afterwards and the audience was let in on the secret with the latest about what he believes dark energy to be. Unfortunately, I can't tell you.

As the skies remained fully clouded over since the downpours earlier in the afternoon, there was no stargazing and the convention concluded around 9:30pm while bump out occurred over the following hour or so. Nerida and Mark Stephens took home their marquees used by Sidereal Trading, while the MPAS marquee used by OzGrav was left to dry inside overnight and packed away by Phil on Sunday.

VASTROC 2023 was by all accounts a huge success. I overheard someone say that it was the best VASTROC they'd ever been to and, no, that wasn't by an MPAS member and it wasn't their first one either!

With any significant event, what the audience sees on the day is only the tip of the iceberg of effort that goes in to making it work well. If very few things go wrong, it isn't due to luck but due to good planning, preparation, and contingencies and this VASTROC was no exception.

Thanks naturally go to the presenters, as it takes a lot of time to assemble a good talk, and to the Chairs for keeping them to time. I especially commend Chris Kostokanellis for his confident role at his first VASTROC and handling announcements throughout the day.

A big thank-you to Nerida Langcake for her unwavering support since it was decided we host this VASTROC, and we began the search for speakers and started communicating outside MPAS. It can be a daunting and scary endeavour if you've not been to one before and not hosted and convened one before. But with experience, networking, design, and project management skills it does fall into place one piece at a time. This time we experimented with many new things, and it seemed to work well. Historically, VASTROC was held on a long weekend and ran for 1.5 days. This time we tried for 1 day and quickly filled the speaker slots and booked out the auditorium not long after opening bookings back in July. We had a good number of public attend, who belong to no astronomical club, and that was a big bonus.

In the lead up, we had Phil Peters meticulously pressure clean the entire site so you could eat off the concrete, and tidy the auditorium, and Greg Walton had the warm room in the observatory the most spick and span it's been in years. The site looked positively manicured on the day. The new eye-catching MPAS marquee really proved its worth when extra space was needed and to keep the Sun (then the rain) out; in this case for OzGrav. The audio-visuals held together well, with Guido being cameraman, soundman, and connection troubleshooter for the day, then video editor the next day. The colourful handout programmes designed by Nerida, that Jamie Pole printed and collated in the days beforehand, made the event look swish and professional.

Jamie arranged and ordered all the food, brought the supermarket provisions on-time, and Phil nobly sacrificed his Falcon by loading over 80 roast dinners and desserts on board, and no doubt the olfactory memory of that will linger fondly for some weeks to come.

Meanwhile in the engine room, the kitchen, I saw Pia Pedersen, Anne Danne, Yvonne Hui, Katherine McCoy, Kelly Clitheroe, and Pam Halsall I think, either wielding dish cloths, unstacking the dishwasher or serving food. If I missed anyone do sing out please as it's impossible to see everything happening on the day. We had Piper Grierson looking after the glass counter and shadowing her mum, Nerida, helping where needed.

The volunteer astrophysicists and final year PhD students (Rowina Nathan and Ashwathi Nair) who looked after the OzGrav display did a wonderful job, though those headsets are not for those who suffer vertigo in any way. You are simply not aware of anything else going on around you when you wear them and listen intently to the commentary, as I personally found out. I was on my own when I put them on, and the instant I took them off there were 80 people suddenly standing right next to me for a group photo! Click. I hadn't tried them previously.



OzGrav

If I've carelessly forgotten to mention anyone's VASTROC contribution, please accept my apologies. As the Convenor the buck stops here.

We are now eagerly waiting to see if any new members join and, most importantly, who the next volunteer host Society, or perhaps Society collaboration, might be.

Those who've now experienced a VASTROC will realise that as a 1-day event it is pretty much the same as running our annual Astrophotography Workshop or twice-yearly Telescope Learning Day, just that the former ranges across all astronomy topics while the latter two are focused on a particular theme.

Regards, Peter Skilton

Photos by Greg Walton & John Cleverdon

Vastroc on YouTube - <https://youtube.com/playlist?list=PL4y2rMQ3VJ311CrMPayIU1eHI-gZJDFqW&si=wvnKVN-XV8FaGK8N>

Vale Peter Norman

It is with deep sadness that I relay the news of the passing of Dr. Peter Norman last Saturday at home, surrounded by his family. His health had taken a rapid decline in recent weeks.

Peter was one of the truly humble and quietly spoken, giants of the Society and one of the earliest members in the days when it was called the Astronomical Society of Frankston, joining in 1974.

He was President from 1977 to 1989, a Life Member and a well-known speaker at NACAA and VASTROC amateur astronomy conventions on topics about theoretical physics and solar fusion reactions, often bringing along models made from glued together ping pong balls to illustrate a point made in the talk.

During his career days, Peter was a Physics lecturer from what is today the Monash University campus at Frankston and, after retirement, remained very active with running Astronomy classes at the University of the 3rd Age. Amazingly he also continued to publish in professional theoretical physics journals long after retirement.

He was a strong supporter of our outreach evenings and was a regular attendee in the field with his Newtonian telescope at public and school nights until his eyesight faded and was unable to drive. There is a telescope at the Briars dedicated to him with a named plaque. In the last year, his hearing also began fading, though he retained a sharp mind.

Peter is survived by his wife, Doreen, two daughters, a son, and grandchildren.

A service was held at St. Marks Uniting Church, 50 Barkly Street, Mornington on Saturday 25th November at 10am.

Observant members will recognise this as coinciding exactly with us hosting the Victoria-wide VASTROC convention at the Briars. I have discussed this with one of his daughters tonight and she felt that Peter would definitely not have wished to impact VASTROC in any way. The Universe moves in strange ways sometimes.

Talk which Peter Norman gave in 2003 is on our YouTube channel. <https://www.youtube.com/watch?v=8CD7U0cz8bU>
We were still using overhead projectors in those days, and the quality of video cameras was very poor in comparison with even a cheap Smartphone camera these days. But it is a lasting video record. The monthly meetings were held not at the Briars, but at the Peninsula School in Mt. Eliza in those days before the theatre was demolished.

Light speed to you, my good friend. You were a decent fellow and made a difference. *Regards, Peter Skilton*

Peter was a regular attendee at Society meetings right up until Covid stuffed things up. He was always approachable and knowledgeable and always brought the Coffee, Tea and bikkies to the meetings. It is especially sad following so close to Ian Sullivan.

Regards Mark Stephens

It is truly sad to hear of the passing of Dr. Peter Norman, Past President, Life Member, university lecturer, a true gentleman and a friend. I remember when Peter first came to an Astronomical Society of Frankston (ASF) General Meeting around 1974. He was a physics lecturer at what became the Monash University, Frankston Campus. He came with a proposal. Given there was a predicted Total Solar Eclipse expected to pass over Frankston in 1976 and that Halley's Comet was due to re-appear in 1986 he proposed that if we could get a suitable telescope then he could get funding for an observatory on the university grounds. After joining the society he became an active member. At that time the ASF was an associate member of the Victorian Astronomical Society (ASV) and their committee directed us to a dilapidated 12 inch Newtonian telescope that was available for loan known as the B.J.Smith telescope. The scope was duly acquired (another long story) and refurbished. It served as a mobile public telescope mounted on a trailer and was essentially the society's first "Astronomy on the Move" public facility. It was eventually installed in a roll-off roof observatory within the university grounds. Peter and I gave monthly public talks from one of the university's lecture theatres followed by observing at the telescope. I have fond memories of these events particularly as I met my future wife during one of these observing sessions. We still have Peter's wedding present paintings mounted on our dining room wall.

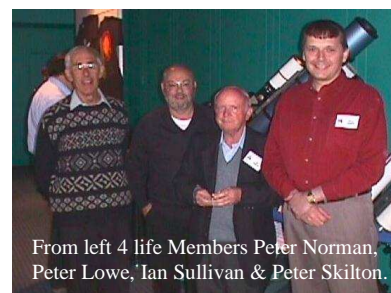
The 1970's were particularly dynamic astronomically. The 1976 solar eclipse was a great success for the society with public talks, television and media interviews. Past President Steve Malone began our first school slideshow talks leading to our school program. Aside from the space program publicity, the 1970-80's contained a veritable shower of naked eye comets and the society was becoming known both locally and within the Australian amateur astronomy community. Peter and I attended the 1976 National Convention of Amateur Astronomy leading to our society's first NACAA in 1990. I transferred to Geelong for my work, but I maintained contact and did not return to the society until 1989. The society had moved on under Peter and other President's guidance. The society's success and longevity is due in no ascertain terms to Peter's contributions. I will certainly remember him fondly. *Peter Lowe*

Peter Norman was a true gentleman. When I joined MPAS in 1999, Peter gave me a copy of a small book he produced on basic astronomy. MPAS members can download a PDF version with the link below. *Regards Greg Walton*

Our Universe - <https://drive.google.com/file/d/12KyTTG3VMImfDEuTXT6KtLB7TnYzZyP/view?usp=drivesdk>



Photo: Peninsula Essence magazine 2019/Gary Sissons.



From left 4 life Members Peter Norman, Peter Lowe, Ian Sullivan & Peter Skilton.

MPAS @ the VicSouth star party near Nhill over the Cup Day weekend. *By Greg Walton*

VicSouth star party had not happened for the last few years due to Covid and a change of ownership of The Little Desert Lodge. The astronomy community were very excited to hear it was back. In past years amateurs have come from all over Victoria and South Australia. Most MPAS members arrived on the Friday, setting up camp or finding their rooms in the lodge. The Little Desert Lodge has many types of accommodation from en suite rooms, bunk rooms, powered and unpowered campsites. There's also a licensed restaurant for those who don't wish to cook. The lodge sits on 100 acres of natural bush with kangaroos, lizards, emus, bush turkeys and many types of small birds, which is ideal for nature lovers and bird watching. But we were here for the perfect dark skies and it was time to set up the telescopes. Behind the lodge is a large green grassy field which is watered with bore water. The north side of the field is reserved for visual telescopes and the south end for the astrophotographer's, but many like myself have a foot in both camps. I setup on the north end with the visual group, as I had packed my 21.5 inch Dobsonian, 6 inch F6 wide field refractor and my 100mm Bino Chair, as my visual gear hadn't got much use of late and I was feeling a bit guilty about that. We were very lucky to have perfect weather and clear skies every night with a cool south breeze to keep any dew away, for the entire 4-day event.

Friday on the first night the Moon was to rise at 1am, getting an hour later each night. Also the first night was set aside for the public and school children from Nhill. Perry Vlahos did the sky tour pointing out Saturn, Jupiter and constellation with his green laser pointer. After, the public headed to the visual telescopes, which kept me very busy for several hours. Under the dark sky, objects like NGC104 are blindingly bright through my large Dobsonian. The LMC was also a crowd pleaser through my 6-inch refractor with 31mm Nagler eyepiece giving 35 times magnification. After the public had left, I went to visit all those objects which I hadn't seen in a long while. The Grus quartet NGC7590, Barred spiral galaxies NGC1365 and 1097, M27, Helix NGC7293, Skull NGC246, and Spare Tyre planetary nebula IC5148. As M45 Pleiades rose above the tree line, the Andromeda galaxy M31 became high enough to be easily seen by the naked eye. We were also able to get a close-up view of M31 through the telescopes or with Bino Chair. Just to the right and a little higher sat the Pinwheel galaxy M33 and through my Dobsonian at 150 times magnification could see the structure of the arms. M31 and M33 are almost impossible to view from the Briars. As the Moon rose, I covered the telescopes and headed off to bed.

Saturday we drove into town to check out an air museum 3 km to the north of Nhill. Then we stopped at Mr Le Café, where you could get just about anything, from pork crackle, noodles, doughnuts or Danish tarts. The evening came around quickly and scopes were at the ready. Second smaller group of public, and again Perry Vlahos did the sky tours. I continued on my mission to hunt down objects which I hadn't seen in many years. But as soon as someone came along asking for a look through my big Dobsonian, I found a bright object like NGC253 galaxy which amazed. We revisited M31, M33 and other northern deep sky objects, including the Horsehead dark nebula using the appropriate filter. Finally running out of steam at 2 am and headed off to bed.

Sunday we all slept in, then we went back into town to check out a pinball museum. I was amazed at how many different machines there were. We really had a great time and I think we played most of the machines. We also revisited Mr Le Café and then headed back to camp for wine and cold beers. Evening again came quickly and as the sky darkened someone shouted out Aurora, I looked south and yes, there was a definitely orange glow reaching up about 30 degrees above the horizon. I quickly set up my 2 time-lapse cameras and pointed them south, and yes, I could see bright aurora on my camera screen. Surprisingly most were capturing the aurora with their mobile phones, so it must be a bright aurora. As the night progressed the aurora faded and we all went back to our telescopes. Around midnight Jim Blanksby came over and pointed out a continuous procession of satellites travelling parallel to the horizon in the south. Then around 1 am the aurora came back even stronger and brighter. I checked my cameras and found one of the batteries had gone flat. I quickly changed the battery as pillars of light moved across the sky. I sat in my Bino chair and did one more lap around the sky before heading of to bed around 2 am.

Monday we all slept in again, then everyone started checking and possessing the images of the Aurora. Pia and I drove north to the town of Rainbow to check out a junkshop, silo art, and to buy lunch. Along the way we saw big machines harvesting wheat and Lake Rainbow. Then back to camp for a nap, before one more night. We reset the cameras in case the Aurora returned. It was a much quieter night as about half of the people had packed up and gone home. I continued to track down northern objects that just look very poor from the Briars and also teaching the younger members a few tricks of the trade, filters, eyepieces, star charts, etc. I called it quits at 1 am, knowing that in the morning I had to pack up all my gear, load the car, then hook up the caravan and hit the road to ASV LMDSS to do it all again, while everyone else would be heading home.



Aurora at VicSouth 2023 star party 10mm lens Pentax Kx by Greg Walton

Aurora Time lapse - <https://youtu.be/JaVRjT8ogSE?feature=shared>



Above - Aurora photos from the Little Desert Star Party. *By Chris Kostokanellis*



MPAS camp at VicSouth Star Party. *By Guido Tack*

MPAS members in attendance: Jim Blanksby, Nerida Langcake, Dave Rolfe, Guido and Monica Tack, Russell Thomson, Rod Brackenridge and family, Chris Kostokanellis, Greg Walton, Pia Pedersen, Kelly Clitheroe, Hugh Coleman, Steve and Simone Mohr.



Public Viewing Night December 1st - Under total cloud cover, and hints of lightly spitting rain, fifty-eight visitors nevertheless attended the Briars for the December public night. Trevor Hand gave the talk indoors about Jupiter, showing his unique papier mâché Jovian moon scale models that took many hours to construct. After the talk, alas, the clouds didn't disperse, so only tours of the observatory were possible.

Helping outdoors, and poised, ready to pounce on the telescopes were Phil Peters, Fred Crump, Chris Kostokanellis, Simon Hamm, Peter Skilton, Katherine McCoy, Rohan Baumann, Sylvie Grandit, Simon Birch, Greg Walton, Leigh Hornsby, Ben Claringbold, John Goodall, Jason Heath, Alan Predjak, Das Patterson, Mark Reid and Donna Blackwood handing out the return passes.

Despite the cloud, the evening was far from uneventful. There were brilliantly colourful fireworks to the northeast, sounding like distant thunder, somewhere near the Mornington Racecourse, and a car came tearing along the back access gravel road to the site at breakneck speed, swerved sharply left at the last minute and disappeared down the paddocks in the dark in the direction of Peninsula Link. It was the fastest I've seen anyone take that 90 degree turn by a big margin. Perhaps they were running late and were desperate for some last minute stargazing.

Shortly afterwards they turned around and headed back, maybe disappointed that they couldn't exit the property onto the freeway via that route. A video I took of them on the way out, however, failed to resolve the number plate as it sped past. Nevertheless, it had a nice red, Christmassy colour to it in the dark, hopefully making it eligible for the current AstroMoPho if I'm lucky. *Regards, Peter Skilton*

Private Family Viewing Night December 9th – There was a special astronomy event at the Briars for 4 families from Melbourne with a neurodivergent young family member each as part of a gift for Christmas by their godparents in common, one of whom forewarned me that she had a severe speech impediment when stressed. Since I understood everything she said all evening, then we must have put on a pretty stress-free experience for them, and she was absolutely thrilled at how welcoming and inclusive we all were with them.

One of the parents used to belong to the Ballarat Astronomical Society before moving south to Melbourne and so was no stranger to the use of Dobsonian telescopes and, as you might expect, had a very good general knowledge about astronomy already. Two of the children were also involved with Scouts.

Sadly the weather was not kind all evening with cloud persisting, so a tour of the facilities was all that was possible with the instruments. After that, inside, Peter Skilton gave an interactive solar system talk with items to hold and answered many questions as they varied across numerous topics, and tried tying what was talked about to some of the known interests and specialties of the visitors. For example, one of the boys seemed to know everything to do with flags of the world (so can be linked with the Southern Cross and other asterisms), and one girl had advanced knowledge of everything to do with rockets, and another was really, really interested in Mars and how to live there one day. Interestingly, none of the families belonged to any astronomical society.

Given the weather conditions outside, and all the kids were 8 years old or younger, it was really remarkable that they all stayed engaged with the talk for over 90 minutes, despite not being able to take a break and see a star or planet through the eyepiece. Helping on the night with setting up and with their professional knowledge of previously working with people of neurodivergent abilities were Nerida Langcake and Phil Peters. At the end of the evening, everyone seemed to go home positive and feeling really good; both visitors and hosts.

Regards, Peter Skilton

Christmas Star Concert Night with Southern Peninsula Concert Band December 8th - The Christmas Star concert went ahead on Friday, December 8th at the Briars on a very warm evening. This was another collaboration between MPAS and the Southern Peninsula Concert Band, based in Rosebud. The first band joint event was for National Science Week in 2019, not too long before COVID-19 crawled out of the wilderness later that year.

Surprisingly, all 85 people who booked to attend the Christmas Star concert did actually turn up on the night. Normally there will be a few no-shows due primarily to illness. Upon arrival, they were greeted by the Society Christmas tree that Phil Peters had planted at the entrance, adorned with LED lighting, together with strategically placed tinsel strung into place around the ceiling earlier in the week.

Fortunately the concert was planned to be capped at 85 in the audience, this being a reasonable loading for the auditorium in the worst case event that it couldn't be held outdoors, which was the original intention. As it turned out, the evening was totally overcast with occasional light rain, so deciding to do it indoors proved to be a good call closer to the night.



The 22-strong band was located at the front of the room, clustered around the lectern and screen, with the Conductor standing in front of the audience. Phil had retrieved the black rubber gym mats from the back of the shipping container and spread them out across the front of the auditorium such that the band's seats could be nestled on them. These spongy mats were originally obtained for the 2019 Apollo anniversary concert because of their echo deadening properties for the band's instruments. On the night, Nerida Langcake offered optional ear plugs to the audience, just in case anyone found the sound level indoors to be too high for their hearing. Given her well-known love of heavy metal grunge music, this was a most thoughtful gesture of mercy.

On time at 8pm, the concert was kicked off by Santa's Little Helper, Peter Skilton, dressed in a green elf costume, with Mr. Spock ears and wearing bells on his pointy shoes with striped red and white leggings, before handing over to the Musical Director, Barry Fletcher, who conducted the band through the first tranche of Moon-related tunes, dressed in business-suitable attire. No-one in the band was aware that there'd be an elf at the front for the evening, and the initial look of surprise on their faces was priceless.

In keeping with the spirit of the season, Phil was also wearing an elf hat at one point, Nerida had Reindeer tinsel horns on, and many audience members wore a Christmas shirt/blouse, brooch or garland of some form. Many in the audience of more delicate disposition decided to be outside, where they were able to eat, drink, chin wag and listen at lower sound levels.

Peter then spoke about the Moon and what it tastes like for 10 minutes, enabling the band to catch breath, before handing back over for the next set of music and medleys. This featured some tunes about coldness at Christmas and Santa, so temperature in the Universe was then spoken about and the mathematics of how Santa actually delivers presents in time on Christmas Eve.

The next set of tunes included some interesting Christmas choices by the Beatles with Maxwell's Silver Hammer, which is a Paul McCartney song about a serial killer. Yes, they do make Christmas tree decorations you can buy that are silver hammers! Peter then gave another 10 minute interlude about cosmic hammer blows on Earth and what the Christmas Star is thought to have been, astronomically speaking.

The 4 raffle prizes were drawn next, three of which included meteorites as a part of them, and a 4th was baked by member Anne Danne.

The final tranche of more traditional tunes followed, then Barry thanked everyone before closing the concert. An event of this kind takes a lot of co-ordination and planning many months beforehand, but many elves make light work and a big thanks to all the background helpers of both societies who tinkered away and helped make it happen magically.

Fortunately, the sound of rain during the Friday concert was minimal and was a mere pitter patter over the sound of the performance. I would say about as loud as reindeer hooves on the roof. A good aspect about this concert and its timing was that the music rehearsal was entirely reusable at other locations afterwards, which the band indeed did at other venues around the Peninsula in the lead up to Christmas. They didn't have an elf though. *Regards, Peter Skilton*

Members Night Xmas BBQ December 16th - MPAS Christmas Dinner 2023.

Members and their friends and families gathered at the Briars from far and wide on Saturday the 16th December for the 2023 MPAS Christmas Dinner. Some came bearing bottled Christmas Cheer, others came wearing it, but everyone came feeling it.

The Don Leggett Astronomy Centre was adorned in the customary tinsel and Christmas lights, expertly decorated by Simon Hamm, Phil Peters, Nerida Langcake and Piper Grierson.

While many in attendance were Christmas Party veterans, for some members it was their first MPAS Christmas dinner, and hopefully it won't be their last. The place was abuzz with cheerful conversation, discussion of the events of the year that was, and the sound of several young, future astronomers running around the lawns and climbing the trees.

Come Dinner time, the Christmas Jeep arrived, driven by Santa and Mrs Clause (aka David Rolfe and Leanne Roach) laden with our roast dinner for the night, which was organized in advance by Jamie Pole. Dave and Leanne proceeded to dispense the Christmas roast with the assistance of a very capable elf helper (aka Phil Peters). Tony & Nelly Nightingale made their first cheesecake which was a big success and very delicious! There were numerous other Elves helping during the course of the evening, with serving, cleaning up, and ensuring the day ran smoothly. On behalf of the MPAS members in attendance, a very big thank you to you all, named and unnamed for your hard work leading to, and on the day.

After dinner, the observatory was opened up and some members took the opportunity to make use of the Society's scopes to view the waxing crescent moon, Saturn, Jupiter and the Orion Nebula through some intermittent cloud. Others took advantage of the opportunity to chat and catch up with friends. The 2023 MPAS Christmas dinner was a fitting end to a very busy year for MPAS.

Wishing all our members a very safe and Merry Christmas and holiday period, and a stellar 2024.

By Chris Kostokanellis.



OBSERVATORY UPDATE

By Greg Walton



You may have noticed that the concrete at the MPAS site is looking very bright and clean. The society has purchased a new pressure washer and Phil Peter has spent many days blasting away many years of dirt. We all owe Phil a Big thanks.

Phil also spent many days cleaning the clubrooms ahead of VASROC, cleaning the light fittings, mopping all the floors in the clubrooms, vacuuming sales area, dusting just about every surface, washing the Sirius dome inside and out; then even found time to trim the trees.



Throughout the day many people drop in to checkout the MPAS site. Phil usually greets them and gives them a tour of the clubrooms and observatory. Many of these people return on our public nights. Even the fire department has visited recently.

The Society has purchased some zoom eyepieces for the telescopes in the observatory. Hopefully this will save time by not needing to change eyepieces as often.



The MPAS Honour board has been updated. Big thanks to Nerida Langcake.

Mornington Peninsula Astronomical Society

Founded in July 1969

Presidents	Vice-Presidents	Secretaries	Treasurers	Life Members
Jim Imrie (1969) Don Driver (1970) Dr. Peter Norman (1977-89) * L. Steve Malone (1990) * T. Bruce Tregaskis (1991) * David Murray-Girling (1992) * Peter Lowe (1993-95) Dr. Peter Skilton (1996-99) Ian Porter (2000) Dr. Peter Skilton (2001-03) Peter Lowe (2004-15) David Rolfe (2016-17) Peter Lowe (2018-19) Dr. Peter Skilton (2020-current)	L. Steve Malone (1978-82) * T. Bruce Tregaskis (1983-84) * Ken Bryant (1985) * T. Bruce Tregaskis (1986-89) * Tony Hales (1990) L. Steve Malone (1991) * Peter Lowe (1992) Dr. Peter Skilton (1993-95) David Murray-Girling (1996) * Peter Lowe (1997-98) Ian Porter (1999) Richard Pollard (2000-01) David Murray-Girling (2002) * Ian Sullivan (2003-07) * Bob Heale (2008-09) Brett Bajada (2010-12) David Rolfe (2013-15) Paul Albers (2016) Peter Lowe (2017) Greg Walton (2018-19) Mark Stephens (2020-2023) Chris Kostokanellis (2024-current)	T. Bruce Tregaskis (1970) * Stephen Wilbourne (1971-77) T. Bruce Tregaskis (1978-81) * Don Leggett (1982-83) Clive Nicholls (1984-85) Don Leggett (1986-97) Richard Pollard (1998-99) Roger Giller (2000) Sally Zetter (2001-03) Bob Heale (2004) Don Leggett (2005-07) Dr. Peter Skilton (2008-19) Nerida Langcake (2020-current)	Clive Mather (1971-77) * Peter Lowe (1978-80) Peter Brown (1981-97) * Bob Heale (1998-2001) Marty Rudd (2002-12) Jamie Pole (2013-current)	Alan Fraser * John Palmer * Brian Cabena * Clive Mather * Dr. Peter Norman * Ken Bryant * Greg Walton Don Leggett Ian Sullivan * Dr. Peter Skilton David Rolfe Peter Lowe

* deceased

The society was started as the ASF in 1969, then was renamed to be MPAS on 21/01/2004.

Hasselblad panorama by Cdr Neil Alden Armstrong* (aged 38) on 1969 July 21 AEST. Edwin Eugene (Buzz) Aldrin is shown unloading the Apollo 11 Lunar Module. Michael Collins remained above in lunar orbit in the Command Module.

Mornington Peninsula Astronomical Society - 2024 Calendar

Day	January	February	March	April	May	June	July	August	September	October	November	December	Day
1	M New Years Day	Th	F 8pm Public Night Cancelled	M Easter NACAA	W	S	M	Th	Su Fathers Day	T	F 8pm Public Night	Su	1
2	T	F 8pm Public Night	S	T	Th SPSP	Su	T	F 8pm Public Night	M	W	S VSSP	M	2
3	W	S	Su	W	F 8pm Public Night	M	W	S	T	Th	Su VSSP	T	3
4	Th	Su	M	Th	S SPSP	T	Th	Su	W	F 8pm Public Night	M VSSP	W	4
5	F 8pm Public Night	M	T	F 8pm Public Night	Su SPSP	W	F 8pm Public Night	M	Th	S	T Cup Day	Th	5
6	S 8pm Public Night	T	W	S	M	Th	S	T	F 8pm Public Night	Su Daylight Savings Starts	W	F 8pm Public Night	6
7	Su	W	Th	Su Daylight Saving Ends	T	F 8pm Public Night	Su	W	S	M	Th	S 2pm Cosmology	7
8	M	Th	F	M	W	S	M	Th	Su	T	F	Su	8
9	T	F	S	T	Th	Su	T	F	M	W	S	M	9
10	W	S	Su	W	F	M King's Birthday	W	S NSW	T	Th	Su	T	10
11	Th	Su	M SFFD Labour Day	Th	S	T	Th	Su NSW	W	F	M Remembrance Day	W	11
12	F 8pm Public Night	M	T	F	Su Mothers Day	W	F	M NSW	Th	S 2pm Cosmology	T	Th	12
13	S	T	W	S 2pm Cosmology	M	Th	S	T NSW	F	Su	W	F	13
14	Su	W Valentines Day	Th	Su	T	F	Su	W NSW	S 1pm APWS	M	Th	S Members Xmas Dinner	14
15	M	Th	F GSP	M	W MPAS Meeting 8pm	S 2pm Cosmology	M	Th NSW	Su	T	F	Su	15
16	T	F	S GSP	T	Th	Su	T	F 8pm Public Night	M	W MPAS Meeting 8pm	S	M	16
17	W MPAS Meeting 8pm	S Trivia Night	Su GSP St Patricks day	W MPAS Meeting 8pm	F	M	W MPAS AGM 8pm	S 2pm Cosmology	T	Th	Su	T	17
18	Th	Su	M	Th	S Cos 4pm Members	T	Th	Su NSW	W MPAS Meeting 8pm	F	M	W Scorpius Deadline	18
19	F 8pm Public Night	M	T	F	Su	W MPAS Meeting 8pm	F	M	Th	S TLD 4pm Members	T	Th	19
20	S OT 4pm Members	T	W MPAS Meeting 8pm	S Cos 4pm Members	M	Th	S Cos 4pm Members	T	F	Su	W MPAS Meeting 8pm	F	20
21	Su	W MPAS Meeting 8pm	Th	Su	T	F	Su	W MPAS Meeting 8pm	S Cos 4pm Members	M	Th	S	21
22	M	Th	F	M	W	S 4pm Members	M	Th	Su	T	F	Su	22
23	T	F	S TLD 4pm Members	T Scorpius Deadline	Th	Su	T	F Scorpius Deadline	M	W Scorpius Deadline	S 4pm Members	M	23
24	W	S 4pm Members	Su	W	F SCAG	M Scorpius Deadline	W	S 4pm Members	T	Th	Su	T	24
25	Th	Su Bentle Festival	M	Th ANZAC Day	S	T	Th	Su	W	F SCAG	M	W Xmas Day	25
26	F Australia Day	M Scorpius Deadline	T	F	Su	W	F SCAG & Joes	M	Th	S	T	Th Boxing Day	26
27	S 2pm Cosmology	T	W	S SCAG	M	Th	S	T	F AFL Public Holiday	Su	W	F	27
28	Su	W	Th	Su	T	F	Su	W	S	M	Th	S	28
29	M	Th	F Easter NACAA	M	W	S	M	Th	Su	T	F	Su	29
30	T		S Easter NACAA	T	Th	Su	T	F	M	W	S	M	30
31	W		Su Easter NACAA		F		W	S		Th Halloween		T New Years Eve	31

Colour code

- Green Boxes** - Public nights @ the Briars 8pm
- Yellow Boxes** - MPAS Meeting @ the Briars 8pm to 10pm
- Blue Boxes** - Members BBQ nights @ the Briars 6pm, working bee starts 4pm
- Khaki Boxes** - SCAG Scout, Cubs & Guides @ the Briars 8pm to 10pm
- Pink Boxes** - Cosmology Group @ the Briars 2pm
- Cos** - Cosmology speaker @ the Briars 6pm
- Grey Boxes** - Weekends & Public Holidays
- Bold Underlined Days** - School Holidays
- NASA Moon Day** - 14th September

MPAS Calendar 2024 - by Greg Walton - Version 2023 17th December

Autumn Equinox - March 20
 Winter Solstice - June 21
 Spring Equinox - September 22
 Summer Solstice - December 22



Full Moon

New Moon

- OT = Observatory/telescope Training** 20th Jan 8pm after w/bee & BBQ
- Trivia & Music Night** = 17th February @ the Briars
- BF = Bentleigh Festival** 25th February @ Bentleigh
- SFFD = Somerville Family Fun Day** 11th March (Labor Day)
- GSP = Gippsland Star Party** 15th to 17th March @ Buchan
- TLD = Telescope Learning Day** 23rd March @ the Briars 4pm (Public)
- NACAA 2024** = 29th March to 1st April over Easter @ Parkes NSW
- SPSP = South Pacific Star Party** - 2nd to 5th May @ Ilford NSW
- NSW = National Science Week** 10th to 18th August (Public)
- APWS = Astrophotography Workshop** - 14th September @ the Briars 1pm
- TLD = Telescope Learning Day** 19th October @ the Briars 4pm (Public)
- VSSP = VicSouth Desert Star Party** 1st to 4th November @ Nhill

WHAT'S ON



The 2024 timetable of public events.

JANUARY

Friday 5th, 8pm Briars. Public stargazing night. Speaker Guido Tack. 90 booked.
 Saturday 6th, 8pm Briars. Public stargazing night. Speaker Guido Tack. 90 booked.
 Friday 12th, 8pm Briars. Public stargazing night. Speaker Katherine McCoy & Peter Skilton. 90 anticipated.
 Friday 19th, 8pm Briars. Public stargazing night, Australia Day. Speaker Manfred Berger. 90 anticipated.

FEBRUARY

Fri 2nd, 8pm Briars. Public stargazing night. Speaker Trevor Hand. 90 booked.
 Saturday 17th, 6pm Briars. Trivia Concert Night with Cranbourne Lions Band. 90 anticipated.
 Sunday 25th, all day marquee. Benteigh Street Festival, Main St, Benteigh. 6,000 Public anticipated.

MARCH

Friday 1st, 8pm Briars. Public stargazing night. *Cancelled due to Shire roadworks cutting all Briars site access at the bridge.*
 Monday 11th, all day marquee. Somerville Family Day, Fruit Growers Reserve, Somerville. 19,000 Public anticipated.
 Friday 15th-Sun 17th, Buchan for Gippsland Star Party. Collaboration with LVAS & ASV (not a public event, must bring own gear).

APRIL

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

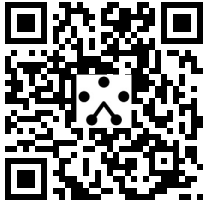
MAY

Fri 3rd, 8pm Briars. Public stargazing night. Speaker TBD. 90 anticipated.

** The MUSICAL STARGAZING TRIVIA NIGHT 2024 **

Held on 17th February 2024 - 6PM @ The Briars.

- Sausage sizzle and raffles throughout the evening.
- Live music from our event partners at the Cranbourne Lions Concert Band
- Telescope Viewing
- BYO Picnic blanket, drinks and nibbles
- Dress in a space themed outfit for a chance to win spot prizes!



Bookings: <https://www.trybooking.com/BWEES>

Entry Price: Adults: \$20

Kids Under 16 Free!



★ New Members Welcome ★

Abhinav Gajurel
 Maria Gabriela Queiroz & Malik Rahman
 Das & River Patterson
 Maryel Sousa & James Watts
 Taren Meyn & Taren Ron
 Sheryl Brown & Jesse and Bradley

MPAS SUBSCRIPTIONS 2024

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 2024 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 2024 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. Post to MPAS, The Briars, 450 Nepean Hwy, Mt Martha 3934
- 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.

CALENDAR		January / 2024					Red Days indicate School Holidays
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
	1 New Year's day	2 Moon at 404,909km Io transit 11:37pm S	3 Io shadow 12:49am S Io transit 1:47am F Eu transit 10:12pm F Eu shadow 10:17pm S	4 Last Quarter Eu shadow 12:34am F	5 Public night 8pm	6 Public night 8pm	
7	8	9 Venus below the Moon dawn	10 Mercury below the Moon dawn Eu transit 10:22pm S	11 New Moon Io shadow 9:15pm S Io transit 10:08pm F Io shadow 11:22pm F	12 Public night 8pm Vesta near M1	13 Moon at 362,267km Vesta near M1	
14 Saturn right of thin crescent Moon Vesta near M1	15 Vesta near M1	16	17 Society Meeting 8pm	18 First Quarter Jupiter right of the Moon	19 Public night 8pm	20 Working bee 4pm BBQ 6pm Ob's Training 8pm	
21	22	23	24	25	26 Full Moon Australia Day	27 Cosmology 2pm	
28 Mercury and Mars 0.2 deg apart dawn	29 Moon at 405,777km	30	31	18th Io transit 9:52pm S Io shadow 11:11pm S Io transit 11:59pm F			

Monthly Events

Public night - 8pm to 10pm on the 5th, 6th, 12th & 19th @ The Briars MPAS

Society Meeting - 8pm to 10pm on the 17th @ The Briars (Public & members)

Working Bee - 4pm - **Members night & BBQ** - 6pm on the 20th @ The Briars

Observatory training - 8pm on the 20th @ The Briars

Cosmology - 2pm on the 27th @ The Briars

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

<p>Jupiter Moon code Io = Io Eu = Europa Ga = Ganymede Ca = Callisto S = start F = finish</p>
--

CALENDAR		February / 2024					Red Days indicate School Holidays
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
				1	2 Public night 8pm	3 Last Quarter	
4	5	6	7	8 Venus & Mercury below thin crescent Moon dawn	9 Alpha-Centaurids meteor shower	10 New Moon Comet 144P/ Kushida near Aldebaran	
11 Moon at 358,088km	12	13	14	15 Jupiter above the Moon	16	17 Trivia Night 6pm First Quarter	
18	19	20	21 Society Meeting 8pm	22 Comet 144P/ Kushida near NGC1807 & 1817	23 Venus & Mars close dawn	24 TLD 4pm BBQ Full Moon	
25 Bentleigh Festival	26 Moon at 406,312km	27 Scorpius Deadline	28	29			

Monthly Events

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

Public night - 8pm to 10pm on the 2nd @ The Briars MPAS

Trivia Night - 6pm to 10pm on the 17th @ The Briars MPAS (Public & members)

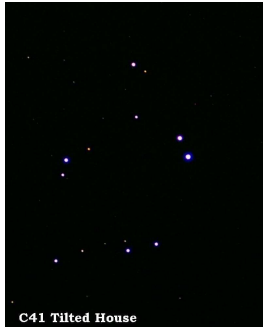
Society Meeting - 8pm to 10pm on the 21st @ The Briars (Public & members)

Telescope Learning Day & Members night BBQ - 4pm on the 24th @ The Briars (Public & members)

Bentleigh Festival - 10pm to 2pm on the 25th @ Bentleigh (Public)

THE BRIARS SKY

By Greg Walton



C41 Tilted House



NGC1807



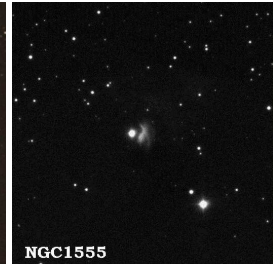
M1 Crab nebula

In January / February as Orion climbs higher and the Pleiades cluster M45 (Seven Sisters) is at its highest point in the northern sky, you will notice a bright yellow star between Orion and Pleiades, Aldebaran the eye of the Bull in Taurus. Aldebaran is an irregular variable changing its magnitude from 1 to 0.75 as it sheds its outer layer. With binoculars or your 50mm finder scope on your telescope, you will see a large open cluster called the Hyades cluster. Within the cluster you will easily see a group of stars that look like a tilted house.

The Hubble variable nebula NGC2261 is a popular target during summer; it looks like a small comet. But did you know there is another, the Hind's variable nebula NGC1555. Both of these nebulas are illuminated by a variable star, which means they change their brightness over time. The Hind's variable is a challenging object that can be found below the Hyades cluster.



NGC2261



NGC1555

Right of Aldebaran is a small open cluster NGC1807 which has a pleasing string of stars.

Above Zeta Tauri is the red star Tauri 119. Through a small telescope it definitely looks burnt orange, but through a large telescope its hard to see that its red as its way to bright.

Below Zeta Tauri is the Crab Nebula, Messier 1, which is a super nova remnant. At 8.4 magnitude you would think it would be quite bright, but it has a low surface brightness, making it a challenge to see from the Briars. Best to use a large telescope with a UHC nebula filters.

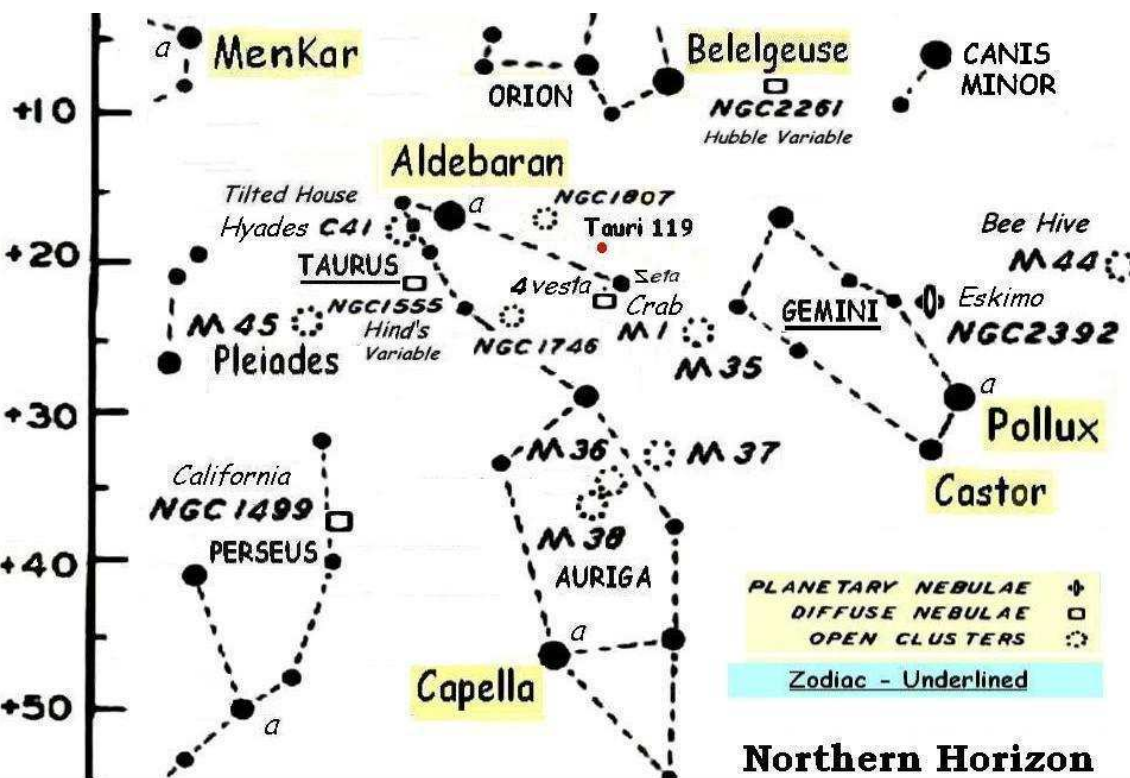
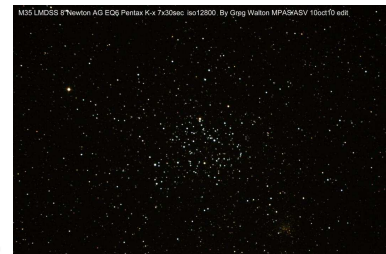
From 11th & 15th of January, the minor planets Vesta is between the star Zeta Tauri and the Crab Nebula.



With binoculars or a 50mm finder scope, you should be able to find Vesta as it shines at 7th magnitude. Vesta is 525 kilometres in diameter and resides in the asteroid belt between Mars and Jupiter at 2,35 au from the Sun. Vesta was discovered in 1807 by Heinrich Wilhelm Matthias Olbers and named after the Roman Goddess of home and hearth. Google - 4 Vesta live sky to find its exact location.

If you can find a clear northern horizon, the area of sky below Zeta Tauri has 4 bright open clusters: M35, M36, M37 & M38. From the Briars it's possible to see these open clusters, as they contain many bright stars. But it's best to view or image these from a dark sky location.

See right - M35, M36, M37 & M38 taken from ASV's LMDSS near Heathcote.



1st planet-forming disk found in another galaxy

Our Earth and the other planets in our solar system were born from a giant disk of dust and gas around our sun. And astronomers have found many such disks in our Milky Way galaxy. They call them circumstellar disks, or protoplanetary disks. It's in these disks that planets are being born. On November 29, 2023, scientists said that – for the first time – they've found a circumstellar disk around a massive young star in another galaxy.

The disk resides in the Large Magellanic Cloud, a neighbouring galaxy to our Milky Way, 160,000 light-years away. The discovery shows that such planet-forming disks are likely common around stars in other galaxies besides our own. Researchers from the U.K., Germany and the U.S. used the Atacama Large Millimeter/submillimeter Array (ALMA) in Chile to make the discovery. The research team published their peer-reviewed results in *Nature* on November 29, 2023.

1st extragalactic accretion disk

The circumstellar disk is a type of accretion disk. In accretion disks, things are both orbiting a central body – a sun, or, for example, a black hole – and small bodies are also accreting, or sticking together, to make larger bodies. Thus planets are born. The disk that ALMA discovered is the first accretion disk ever detected in a galaxy outside of our own Milky Way.

The ALMA observations are the first to confirm the circumstellar disk, but there were previous hints as to its existence. In 2019, the European Southern Observatory (ESO) released an image from its Multi Unit Spectroscopic Explorer (MUSE) instrument on the Very Large Telescope (VLT) of a jet of material being emitted by a young star. That star, HH 1177, is deep inside a gas cloud in the Large Magellanic Cloud. This is the same star ALMA observed the circumstellar disk around.

Anna McLeod who is the lead author at Durham University in the U.K., said "We discovered a jet being launched from this young massive star, and its presence is a signpost for ongoing disc accretion."

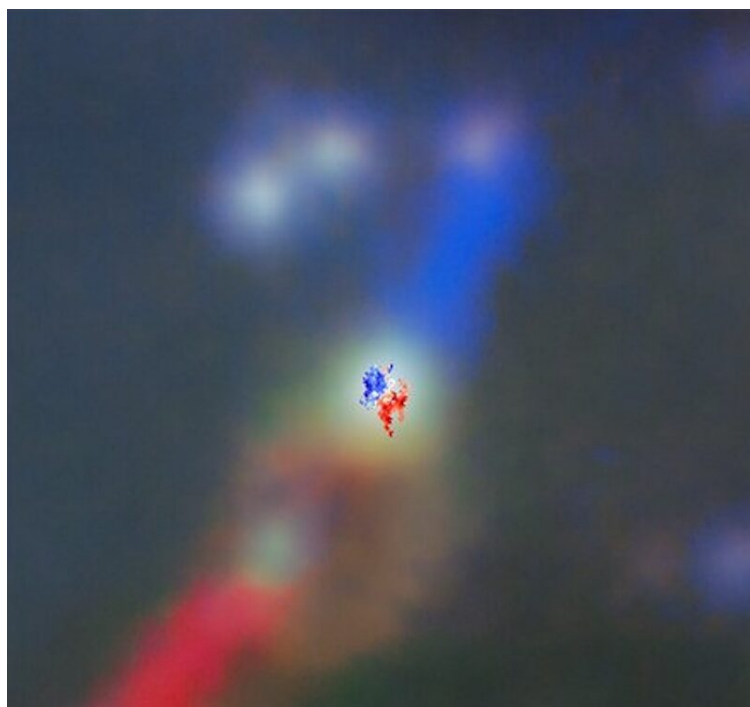
Now, ALMA has confirmed that the astronomers' suspicions were correct; there really is a planet-forming disk around this star.

Detecting accretion disks

So, how do astronomers detect accretion disks? A major clue has to do with speed. The material – gas and dust – around a young star is pulled in toward the star. But it doesn't hit the star. Instead, it forms a broad, flattened, spinning disk. Not all the material is moving at the same speed, however. The closer the material in the disk is to the star, the faster it rotates. Astronomers can measure that difference in speed and deduce that there's an accretion disk around the star. This also affects the frequency of light coming from the disk.

Co-author Jonathan Henshaw at Liverpool John Moores University in the U.K. explained: "The frequency of light changes depending on how fast the gas emitting the light is moving towards or away from us. This is precisely the same phenomenon that occurs when the pitch of an ambulance siren changes as it passes you and the frequency of the sound goes from higher to lower."

The discovery will help astronomers learn more about how planets form, both in our galaxy and well beyond.



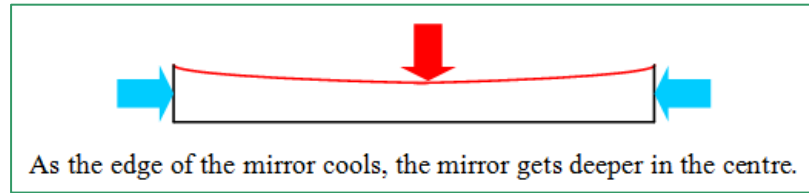
This image comes from the ALMA telescope in Chile. It shows a planet-forming disk surrounding the young star HH 1177. The spinning disk appears blue where it's moving toward us, and red where it's spinning away from us. Image via ESO/ALMA (ESO/NAOJ/NRAO)/A. McLeod et al.

YOUR ASTRO QUESTIONS



Is there any advantage in having cooling fans on my Newtonian telescope? By Greg Walton

The front side of a Newtonian telescope's primary mirror has a radius ground into its surface. As the mirror cools, the edge loses heat faster than the centre, making the cooler edge shrink more than the centre. This can make the mirror bucket or pinch and the usual outcome is that the mirror gets deeper in the centre. This makes the view through the telescope less than desired. Given enough time the primary mirror temperature should stabilize and the view improves.



Some telescope manufacturers add a fan which blows cool air on to the centre of the primary mirror from the rear. For Newtonian telescopes from 8 inches to 12 inches this can help you get a better view faster. Though I have seen Newtonians which are sealed at the rear and surprisingly the view has been good from the outset. This is because the mirror is already at equilibrium, with no draught to cool the edge of the mirror. Telescopes with this design also have less trouble with dust and spiders entering the telescope.

If you own a Dobsonian telescope larger than 12 inches, then you need to change your tactics. For if you blow air into the back end of the telescope, you are likely to drag dust into the telescope, which will settle on your mirror. Particularly when the rear of the telescope is very close to the ground, such is the case with Dobsonian telescopes, also if you have people walking around stirring up dust at star parties this can make things even worse. You need to turn your fans around, so cool air is drawn in through the front of the telescope and so the warm air is blown out the back of the telescope. You will need to close off the back of the telescope, only making holes for the fans. Also you can't just swap the wires on the fans, as they're designed to spin in one direction. Only buy high quality fans that don't rattle. From experience I found three 80mm fans run more smoothly than one or two 120mm fan. I avoid fans with speed control as they are more expensive and less reliable.



There are other benefits in having the fans extracting the warm air from inside the telescope. If you have ever looked through your telescope with the eyepiece a long way out of focus, you would have seen heat rising up off the mirror, in a boiling affect. The cool air drawn from the front of the telescope, has a more laminar air flow towards the mirror, further improving the view. Of course you need a light shroud for this to work properly, as an open truss tube would allow warm air and dust to enter the side of the telescope. Shrouds also stop stray light from entering the telescope.

On my telescope, I have placed a piece of flyscreen between the fan and mounting point on the back of the telescope. This keeps bugs and large particles of dust out of my telescope. As we know spiders do the most damage.

I have seen fans directing air across the front face of very large mirrors. These are only used to speed up the cooling process. If your large Dobsonian telescope has been sitting out in the sun all day. The mirror would have gained a lot of heat and it will take some time to cool. But personally I wouldn't bother with this fan and just use the rear fans.



Now should I have the fans running while viewing through the telescope? All I can say is, you will need to test your telescope. If the fans are too large and vibrate the telescope you will need to switch them off. But the best situation is to have the fans running while viewing. I have experimented while viewing Saturn and found the view is best with the fans on. My Dobsonian is fairly heavy and my fans are good quality, so there is no vibration. My telescope takes 3 hours to cool down, with the fans on. But at some point in the night you may need to switch the fans off, because if the mirror is colder than the air around it, the mirror will start to dew over. Only experience will help here. I have seen some telescopes that have a switch for the fans near the eyepiece, which is very convenient.

Fitting fans to a sealed refractor or Cassegrain telescope is not usually recommended. As fans would more than likely introduce dust and moisture into your telescope. But I have seen it done, where air has been sucked out at one end of the telescope and pumped back in at the other end. This creates a closed loop with the same air circulating round inside of the telescope. This system is used to combat tube air currents, for those astrophotographers looking for the very best images or video of the planets.

There is a bit of trial and error in getting the best results with any fans. I hope this helps you decide whether to use fans or not.

Satellites seen at midnight on the southern horizon & the explanation of how this occurs. *By Greg Walton*



If you are out under the stars at a dark sky location in Victoria during the summer months at around midnight and can see a relatively clear southern horizon. You may witness something a little strange. A continuous stream of satellites travelling parallel to the horizon from right to left. With sometimes as many as ten satellites in the same patch of sky.

On any evening as the sky darkens, we see many satellites crossing the sky in all direction. We often have competition to see how many satellites we can find. But as we get closer to midnight the satellites become less. The satellites are still in the sky, but we can't see them. This is because, at midnight the sun is under our feet and most of the satellites are now in the shadow of the earth. With no sunlight reflecting off them, satellites become invisible to us.

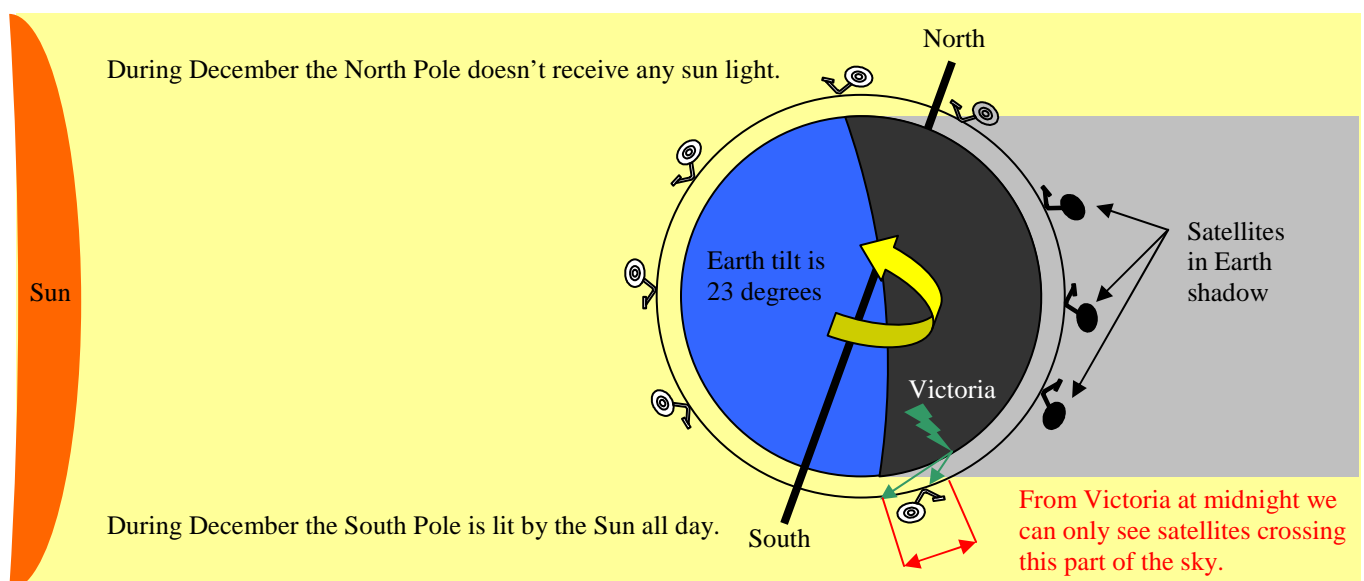
A large percentage of satellites have polar orbits, meaning the satellites cross both poles. The north and south poles become the very busy intersection point with satellites continually cross. As the satellites move away from the poles, the distance between them gets greater.

We know that in December, due to the tilt of the Earth, the South Pole is lit all day by the sun, and when standing at the south pole the sun doesn't set, it just moves around the horizon. While in December at the North Pole, the sun never rises above the horizon.

In summer from Victoria at midnight we can see satellites crossing at small area of sky to the south. As this is the only part of the sky that is illuminated by the sun and as satellites cross into this area, sunlight hits satellites and then we can see them.

I know this is not an easy thing to explain, how we can only see satellites in a small part of the sky at midnight. So I have made a diagram below, which I hope can help explain this phenomenon.

YouTube video of southern satellites at VicSouth - Satellites Battle - <https://youtu.be/68sm6CAjQmA?si=BEV3EE1SUTU5zl-3>

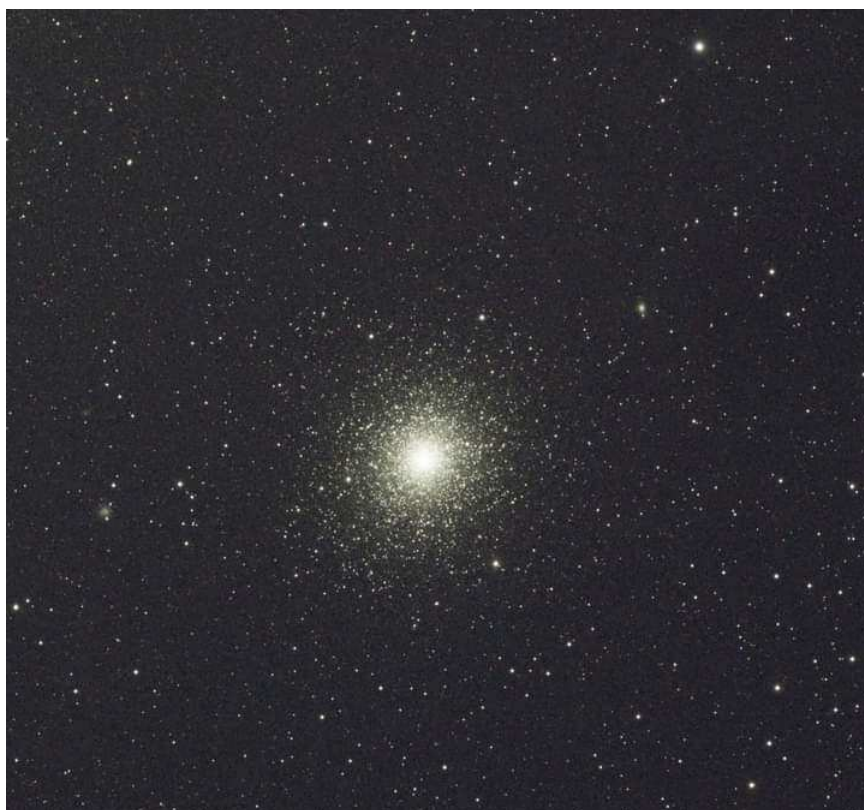


MEMBERS GALLERY



Right - Second brightest globular cluster in the sky NGC104 with 2 smaller globular clusters either side. The right side globular is NGC121

By Sylvie Grandit



Right - Aurora imaged from the Briars in the paddock east of the MPAS observatory.

By Ben Claringbold

Below - Orion Nebula M42 taken with 6 inch Refractor & Field Flatteners on HEQ5 Pentax K30 30x30sec ISO 800 to 12800 LMDSS 12 Nov 2023

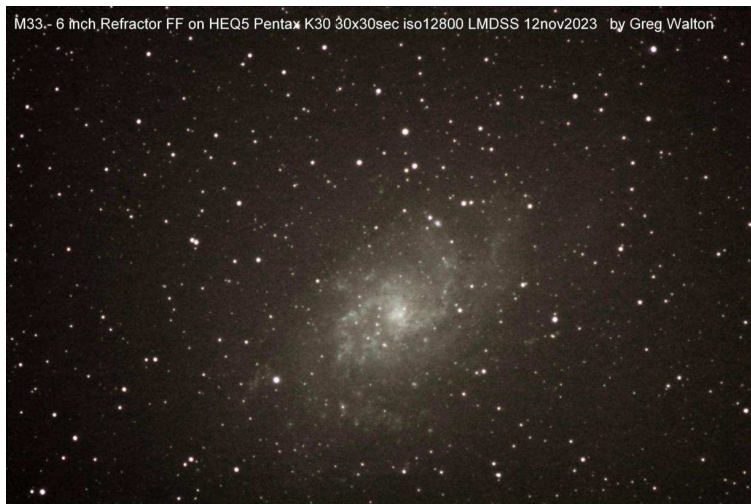
by Greg Walton

Below right - Pinwheel M33 taken with 6 inch Refractor & Field Flatteners on HEQ5 Pentax K30 30x30sec ISO12800 LMDSS 12 Nov 2023

by Greg Walton



M42 - 6 inch Refractor FF on HEQ5 Pentax K30 30x30sec iso12800 LMDSS 12nov2023 by Greg Walton



M33- 6 inch Refractor FF on HEQ5 Pentax K30 30x30sec iso12800 LMDSS 12nov2023 by Greg Walton

MO PHO CHALLENGE

Chris Kostokanellis



Astro Mo Pho challenge for November is the Spooky challenge.

Right -

Large Magellanic clouds incorporating 3 panels now, 3 to go, the next three will be above these three to make a 6 panel mosaic.

A work in progress, 25-30x300 second images for each panel. Over 2 nights, Askar FRA300 Pro, Zwo ASI 294mc Pro, ASIAIR Sky-watcher NeQ6, Optolong L-Ultimate, Stacked and joined in Astropixel Processor processed further in Pixinsight and Photoshop

By Nik Axaris



Large Magellanic cloud incorporating the Tarantula Nebula and all the Globules. Despite it being a satellite galaxy it is full of interesting stellar matter. If the Tarantula nebula was in the same region as Orion, it would cover a much larger part of the sky it is HUGE. 6 panel mosaic in total with much overlap average of 3 hours per panel of 5 minute subs

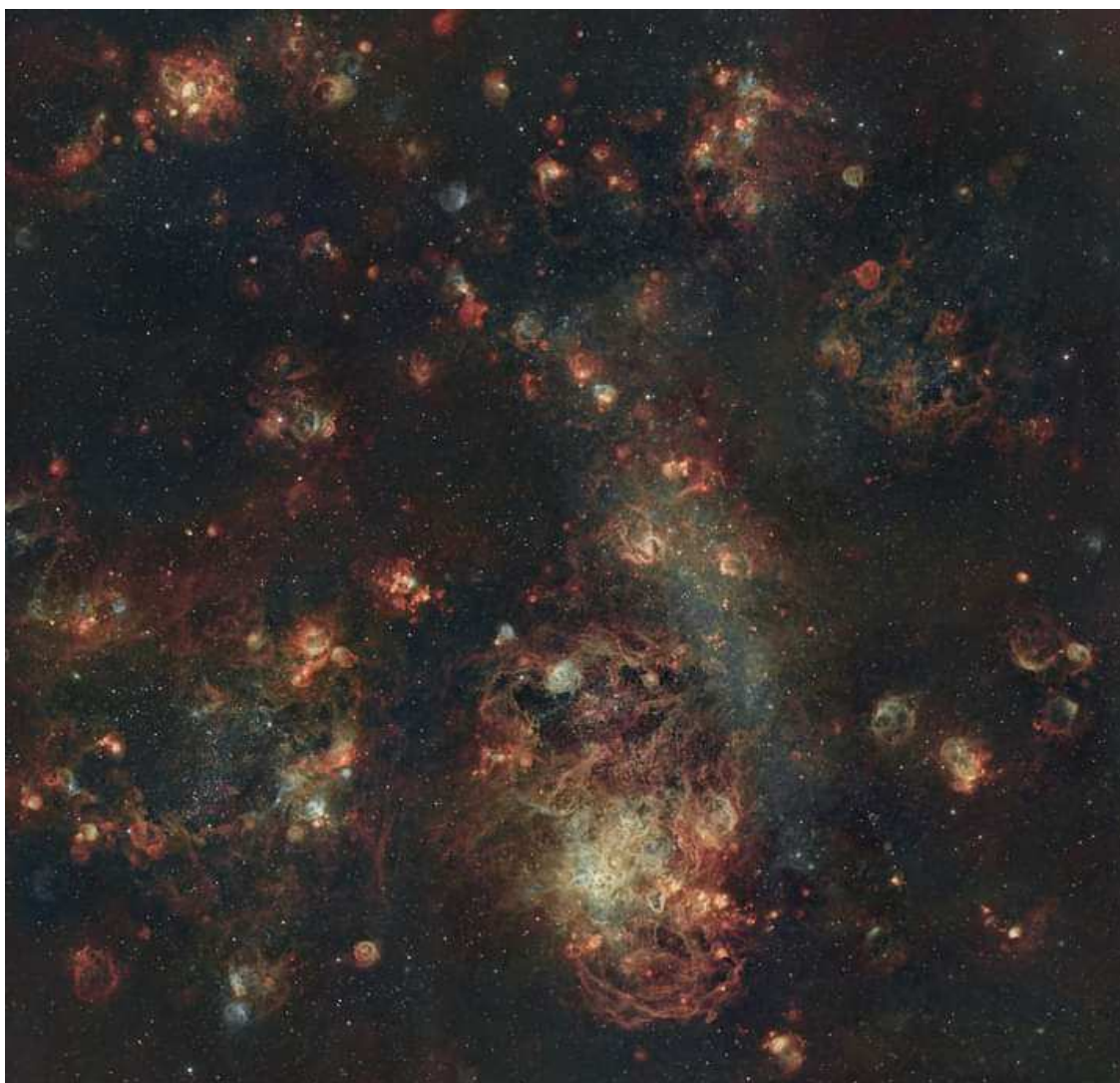
Shot with the ZWO ASI 294MC Pro
Optolong L-Ultimate filter
Telescope: Askar FRA300 Pro

Combined and stacked with Astropixel Processor, processed in Pixinsight and Photoshop

Mosaic organised and acquired in the ZWO ASIAIR and used it with belt-modded Skywatcher NEQ6

This has taken 6 weeks to complete due to the weather and work. I'm not 100% happy but will revisit it when I have time.

By Nik Axaris



Selection of spooky images, captured at the recent VicSouth Star Party.
By Dave Rolfe



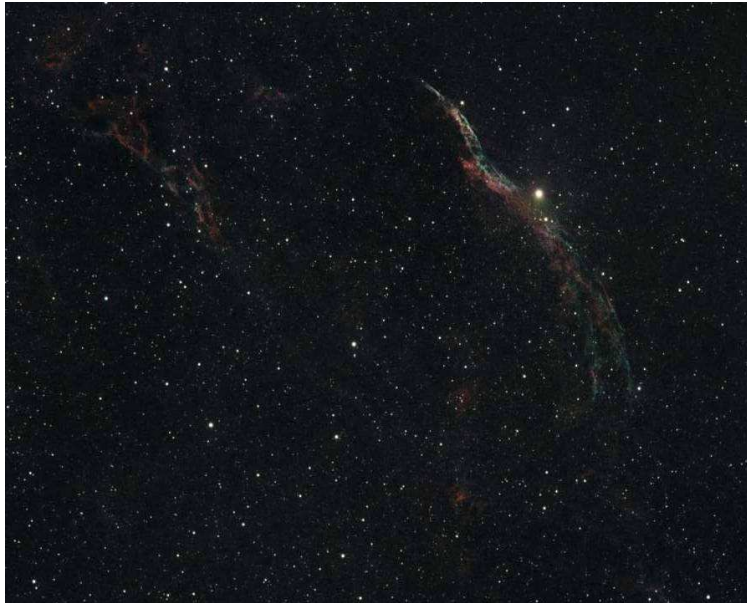
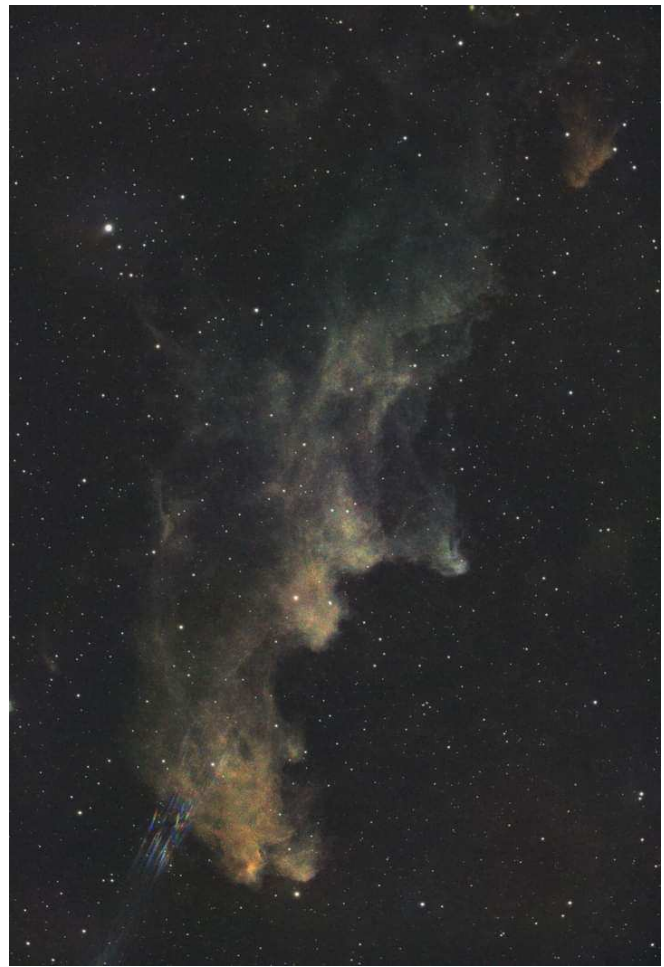
Right - NGC 6960, The Witch's Broom. This is the western section of the Veil Nebula, a supernova remnant in Cygnus. The bright star, 52 Cygni, represents the witch riding the broom. Seeing it sitting very low on the Northern horizon, I managed to capture 10 3-minute exposures with my 80mm refractor and ASI 294 MC Pro camera soon after sunset at Vic South Star Party, before it disappeared behind the trees.

By Chris Kostokanellis

Below - This is the Witch Head Nebula (IC 2118) located near the bright star Rigel, which is the left foot of Orion.

This is 100 minutes of exposure time, no filters, taken from the dark skies of the Little Desert near Nhill, Vic.

The bright rays at the bottom are lens flare from a bright nearby star. *By Chris Kostokanellis*



Right - NGC104 globular cluster.

Imaged with 80mm Refractor with 0.8 Reducer / Flattener

Optolong L-Extreme Filter & ASI294MC Pro Camera.

20x300 Sec Exposures

Stacked and processed in Siril with Darks, Flats and Dark Flats

By Chris Kostokanellis



Below right - My final image from Vic South is M45, The Pleiades Cluster in

Taurus. This is from 40 x 5 Min frames, so 200 minutes total exposure over 2 nights. No Filter. *By Chris Kostokanellis*

Below left - Here is my processed image of M31, the Andromeda Galaxy. I imaged this at the Vic South Star Party.

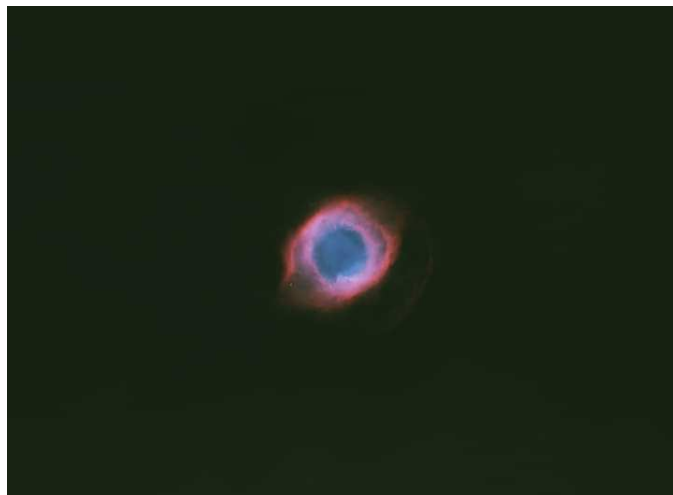
38 x 2 min frames, no filter. Stacked and processed in Siril. *By Chris Kostokanellis*



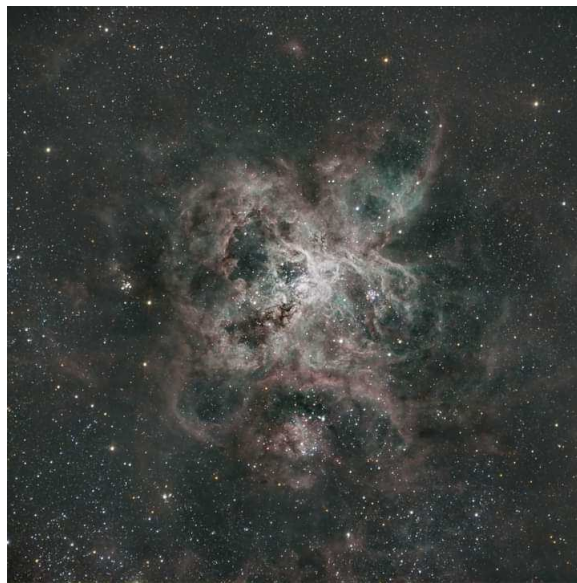
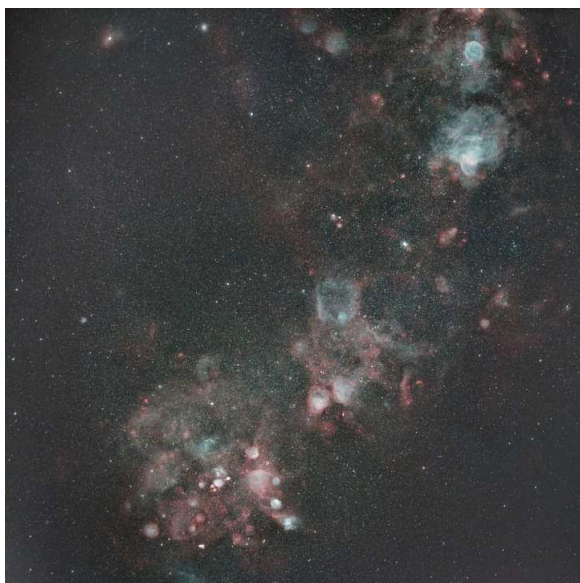
Spooky Mo Pho! Both images were taken at the VicSouth Star Party last weekend in the Little Desert.

Right - NGC7293, the Helix Nebula, also known as The Eye of Sauron, from 83 x 300 sec frames captured over two nights with my WO ZS73 telescope, ASI294MC Pro camera, and processed with PixInsight. Looks pretty spooky to me, and the starless version looks even spookier!

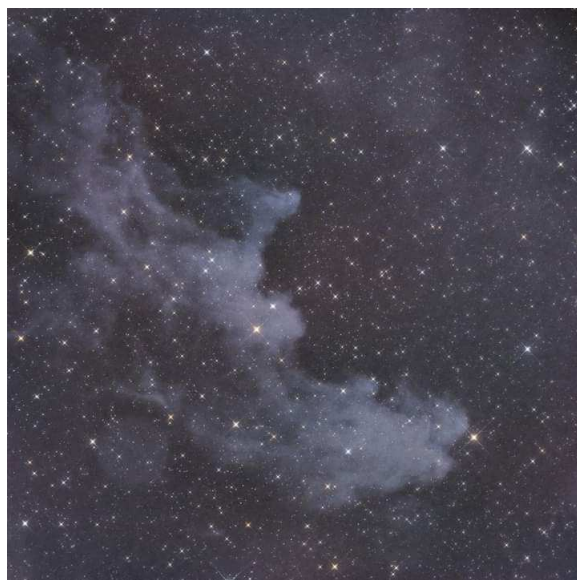
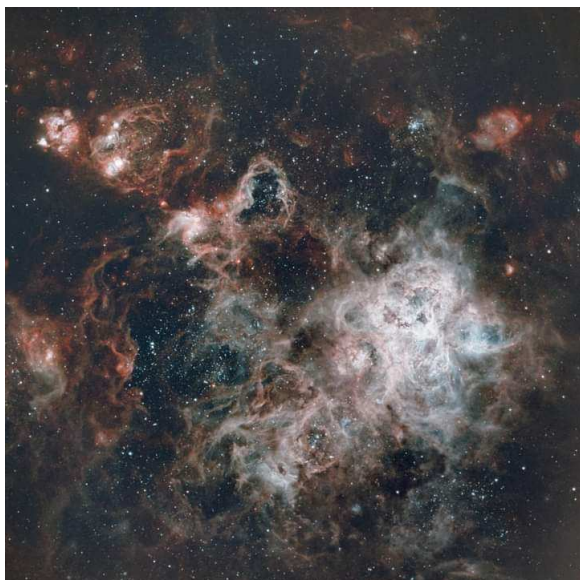
Left - M31, the Andromeda Galaxy, which is usually too low and washed out by the glow of the city when photographed from the Briars. This is from around 40 x 180 sec frames with the same setup as above. Why is it spooky? Because when M31 collides with the Milky Way, everyone will be DEAD! *By Guido Tack*



Below - SMC and the Tarantula Nebula NGC2070 in LMC. Taken from my yard in Clifton Springs, Victoria. *By Kelly Clitheroe*



Below - Tarantula and Witch Head. Both taken from VicSouth LDNP. *By Kelly Clitheroe*



Astro Mo Pho challenge for December is the Christmas challenge.

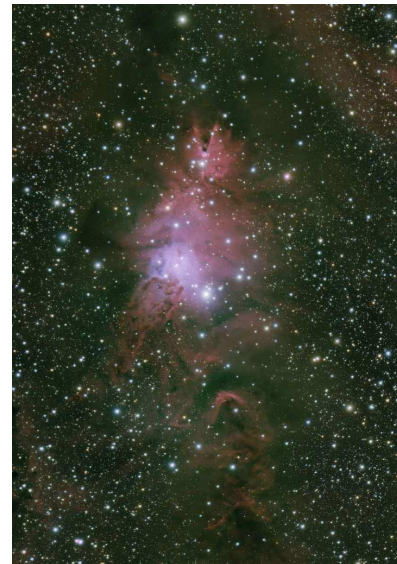
Right - Cover image

Xmas Mo Pho: The Christmas Tree Cluster and Cone Nebula (NGC 2264).

The bright star in the centre is the tree trunk, and the other bright star just below the Cone Nebula is the tree topper.

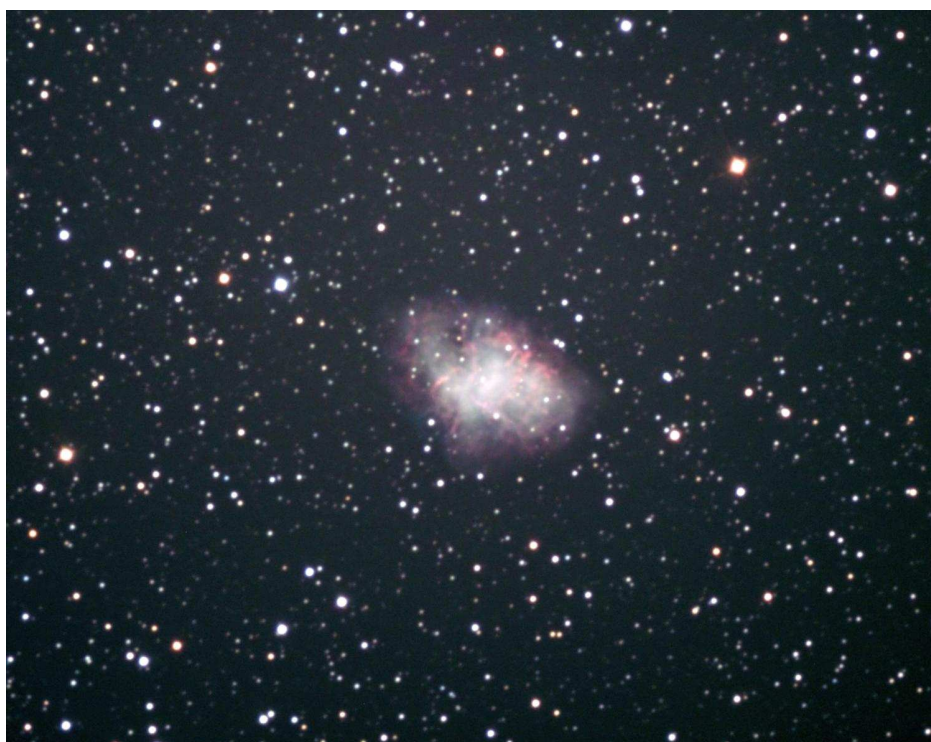
86 x 120 seconds of subs taken at the ASV's dark sky site near Heathcote on 18 November.
William Optics ZS73, ASI294MC Pro, processed with PixInsight.

By Guido Tack



Right - Crab Nebula, which looks more like a Christmas Beetle.

By Dave Rolfe



Right - The Flame nebula and Horse Head nebula lay either side of the star Alnitak, which is one of the stars in Orion's belt.

The flame nebula also looks like a Christmas tree.

Imaged with 300mm lens on a Polaris tracker with a Pentax K30 DSLR 30 shots at 30sec iso12800 stacked on DeepSky stacker.

Taken at ASV's LMDSS on 9th November 2023



NGC2024 - 300mm Lens on Polaris tracker Pentax K30 30x30sec iso12800 LMDSS 9nov2023 by Greg Walton

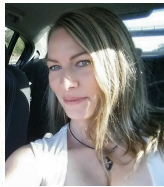
SOCIETY INFORMATION



Peter Skilton



Chris Kostokanellis



Nerida Langcake



Jamie Pole



Anders Hamilton



Trevor Hand



Guido Tack



Simon Hamm



Phil Peters




Greg Walton

OFFICE BEARERS OF THE MORNINGTON PENINSULA ASTRONOMICAL SOCIETY

President: Peter Skilton
Vice President: Chris Kostokanellis
Committee: Anders Hamilton, Trevor Hand, Guido Tack, Simon Hamm and Phil Peters
Secretary: Nerida Langcake
Treasurer: Jamie Pole
Web master: Guido Tack
Scorpius editor: Greg Walton
Librarian: Fred Crump & Lara Conway

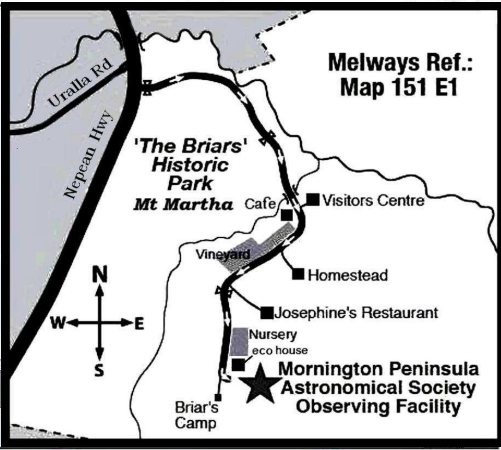
SOCIETY MEETINGS

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: welcomed@mpas.asn.au

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



Fred Crump

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 or Lara Conway

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 welcomed@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: welcomed@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 gwpmpas@gmail.com
 MPAS newsletters online - https://drive.google.com/folderview?id=0BvykxzZG19g_SUNmZVhkZTFGWTA

SCORPIUS The journal of the Mornington Peninsula Astronomical Society

Newsletter Disclaimer - The Scorpius Newsletter is published online, once every two months for its membership, by the Mornington Peninsula Astronomical Society, for Educational Purposes Only. As a newsletter, this publication presents news spanning a spectrum of activities, reports, and publications in order to keep society members abreast of a variety of events and views pertaining to astronomy. While prudent, reasonable effort has been utilized to verify factual statements made by authors, inclusion in this newsletter does not constitute or imply official MPAS endorsement. All materials (except previously published material, where credited) are subject to copyright protection © 2024, Mornington Peninsula Astronomical Society