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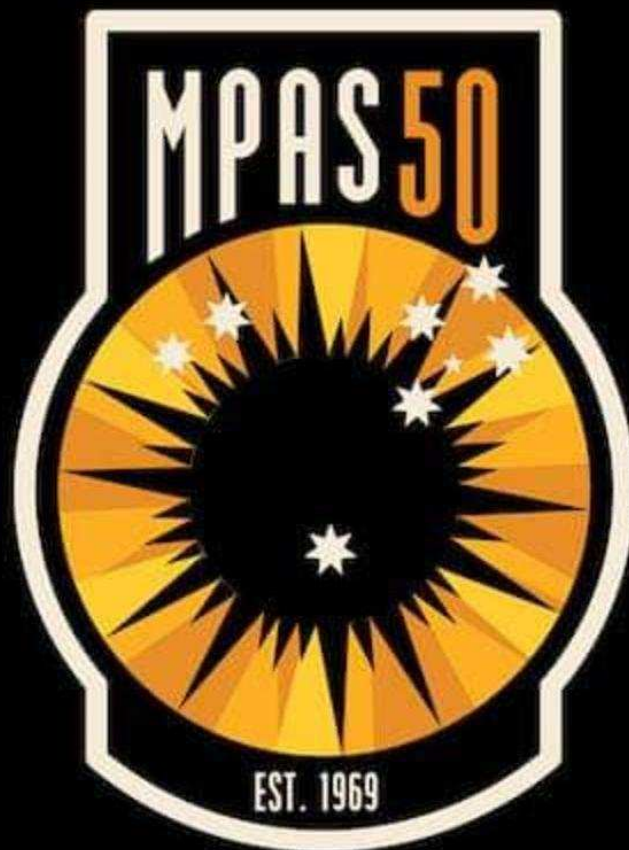
THE JOURNAL OF THE
MORNINGTON PENINSULA ASTRONOMICAL SOCIETY INC.

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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.



20/7/69 - 20/7/19

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SOCIETY NEWS



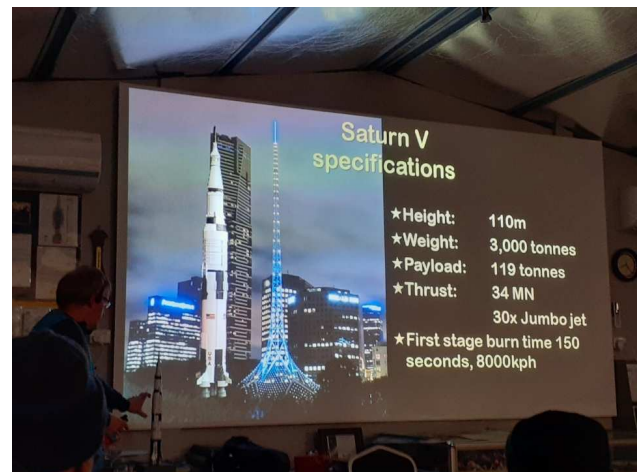
Public Night July 5th - The July public night at the Briars had clear skies all evening and saw 155 in attendance, plus members. We had had fewer than 100 who actually booked. Fortunately we had 147 chairs put out in advance. Unsurprisingly the talk was given on the subject of Apollo by Trevor Hand, complete with scale models for demonstration purposes. Members present and helping outside during the evening were Pia Pedersen, Greg Walton, Fred Crump, Bonnie Cass, Simon Hamm, Kathryn Hand, Bob Heale, Nerida Langcake, Piper Grierson, Mark Stephens, Peter Skilton, Alan Predjak, Jason Heath, Ben Claringbold, Coleen and Peter Conboy, Katherine McCoy, Robin Broberg, David and Jamie Rolfe, Jamie Pole, Peter Lowe and Rod Brackenridge. Views of Jupiter and a moon shadow transit, Saturn and Butterfly Cluster featured among many objects during the evening. We had a visitor from Queensland seeking to surprise her cousin who is a member, and another interesting visitor who is a retired astrophysicist from Cambridge Uni who knew the late Stephen Hawking over beers! He lectures at U3A in Dromana and is regularly broadcast on 3RPP on astrophysics topics. One feature of the evening that was witnessed by many outside at the time just before 9pm, was a bright green fireball. It lasted 3 to 4 seconds over in the north-east, and no more than a hand span above the horizon, travelling in a west to east direction. A few chance photos and car dash cam videos by the public then appeared on Facebook the following day. *Regards, Peter Skilton*

We had a great turnout on Friday night for our MPAS public viewing night with 155 people attending, the topic was "Apollo", chosen because of the upcoming 50th anniversary of the Moon landing on 20th of July (21st in Australia). It was a very clear, albeit cold, night with no Moon visible by the time viewing started, and of course school holidays! The event was so popular, we have decided to run an "encore" repeat on Friday 12th July and again the following week on Friday 19th July. On these nights, fortunately or unfortunately, the Moon will be visible being either side of full Moon. So if you live in Victoria and are interested in attending, Google "MPAS" and it will give you all the information you need. As a heads up, my topics for August and September will be "Jupiter" and "Saturn" respectively as both planets are currently clearly visible. The bright "star" you see more or less overhead at the moment is Jupiter, a small pair of binoculars will easily show its moons. By September, Saturn will take pride of place and will be easily visible, a good pair of binoculars with high magnification will show its rings. *Trevor Hand*

July 9th - Today Pia, Greg, Simon, my girls and I turned the big shed into a gallery with all the beautiful photos that were taken by MPAS members and displayed at Coolart Homestead last year. So good to see them hanging on display once again. *Nerida Langcake*



Public Night July 12th - Was a chilly evening at the Briars for the first of the extra Friday nights ahead of the Apollo anniversary. The talk was given inside by Trevor Hand, supported by his models, to an audience of 36 visitors. Helping on the evening were Kathryn Hand, Fred Crump, Bonnie Cass, Simon Hamm, David Rolfe, Jamie Pole, Anders Hamilton, Peter Skilton, Nerida Langcake, Piper and Ashley Grierson, Mark Stephens, Pia Pedersen, Greg Walton and Ben Claringbold. The evening started under cloud cover that thinned at times but was generally too much for anything other than the Moon. There was even a brief period of light drizzle, before the much awaited hole in the clouds arrived after 9:30pm, affording a window to the Moon and Jupiter for those members of the public who braved the temperature. *Regards, Peter Skilton*



Society Meeting July 17th - For those members who missed out on Trevor's Apollo talk last Wednesday evening at the Briars, the video has now been uploaded to our YouTube channel for you to watch. <https://www.youtube.com/channel/UCm6XOkIcIflt4y0XRBXpXuw/videos> Remember if you subscribe to the channel (which is free) then it will notify you automatically. *Regards, Peter Skilton*

Public Night July 19th - It was a cool night at The Briars last night for the third and last Apollo public evening before the auspicious anniversary itself. The skies surprisingly remained fully clear all evening, despite prediction of increasing cloud in the early evening. We could see cloud to the North in the direction of Melbourne, so the evening started with the telescopes outside then moved indoors afterwards, just in case. We had 76 visitors from near and far attend. Trevor Hand presented his Apollo talk, complete with models, Apollo memorabilia and support from Kathryn Hand. Outside with chattering teeth and hand warmers on the field were Mark Hillen, Ben Claringbold, Greg Walton, Pia Pedersen, David & Jamie Rolfe, Fred Crump & Bonnie Cass, Mark Stephens, Simon Hamm, Mike Smith, Steve Mohr, the entire Lewis family, Ross Berner, Peter Skilton, Peter Lowe and Nerida Langcake. During the evening, David Rolfe was working his HAM radio set up in the kitchen area again, using the special anniversary call sign of VI3MOON. This had also occurred at the general meeting the Wednesday before. Calls were being received at the Briars and logged from across Australia, New Zealand, Japan and America though propagation as far as Europe was being thwarted by solar inactivity at the moment. MPAS has the licence to use this call sign for a few more days, including at the Saturday anniversary dinner. If you know someone who has a shortwave radio, then let them know. The radio gear can also be used to detect meteors (shooting stars) by radio waves being reflected off their brief fleeting ionised tails as they streak through the upper atmosphere. *Regards, Peter Skilton*

Society Dinner July 20th - It was a massive Saturday night at the Briars for the 50th anniversary special celebratory roast dinner with about 86 members in attendance and a table full of the kids and their technologies at the back of the room. Following the delicious dinner, Peter Lowe gave an illustrated talk on the history of the Society, followed by presentations of life memberships and the cutting of a wonderful Moon cake via Leanne Rolfe to mark the occasion. Much like with the 400,000 people who came together to pull off the Apollo 11 mission, big thanks go to those working tirelessly in the new kitchen engine room who kept the show on the road and gave the new dishwasher a thorough workout, and to the many volunteers who worked behind the scenes in the significant planning and preparation for all aspects of the evening. Also thanks to John Cleverdon for making his historical photos of past ASF and MPAS events available to Nerida Langcake to weave her magic in putting it all together as a scrolling slideshow on the big screen. Lots of memories were in those photos. The new canvas honour board, also prepared by Nerida, was on display in the vestibule area featuring the background panorama of Tranquility Base as captured on film by Neil Armstrong with his Swedish Hasselblad HDC. The time capsule buried in 2001 under the lower observing slab was opened and inspected, and will be re-entombed somewhere less damp for opening at the 100th anniversary. Coincidentally it was buried soon after September 11th. The contents included quaint technologies such as CDs, audio cassette tapes, VHS tapes and local and State newspapers, pictures, drawings and messages for the future. It might not have the same taste as the roast, but the key parts of the evening were recorded and will appear on the MPAS YouTube soon. *Regards, Peter Skilton*



Mornington Peninsula Astronomical Society

Founded in July 1969

Presidents

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)

Vice-Presidents

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)

Secretaries

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)

Treasurers

Clive Mather (1971-77) *
 Peter Lowe (1978-80)
 Peter Brown (1981-97) *
 Bob Heale (1998-2001)
 Marty Rudd (2002-12)
 Jamie Pole (2013-19)

* deceased

Life Members

Alan Fraser *
 John Palmer *
 Brian Cabena *
 Clive Mather *
 Dr. Peter Norman
 Ken Bryant *
 Greg Walton
 Don Leggett
 Ian Sullivan
 Dr. Peter Skilton
 David Rolfe



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.

School viewing night 24th July - The incursion last night to Saint Mary of the Cross MacKillop Catholic Parish Primary School in Epping North (hereby code-named school X) went ahead as planned. Although this wasn't the furthest distance we've ever travelled for a school telescope night, it was the longest time to get there in the traffic at 2-2.5 hours' drive for each of us one-way. And that was by different routes for each car as well. And coming home wasn't much better. This length of travel time reminded me of a typical occultation observation field trip that the nearby societies used to do with us fairly regularly for scientific purposes. The school had been specifically referred to us, plus the kids had visited the Planetarium earlier in the day, so expectations

were high for the 86 Year 2 pupils there. I bet they slept soundly that night. Peter Skilton started with a short Apollo 11 video summary by astronaut Mike Collins, then launched into the main solar system talk while showing various interesting bits and pieces along the way. The kids really responded to the coprolite specimen, using all their 5 senses to try to figure out what it was. Then Nerida, Piper, Ashley & Jamie set up indoors the big Dobsonian borrowed from Simon so that the audience could be shown how the telescope worked. Considering these littlies were indoors for nearly 90 minutes listening and asking questions, and sitting on the floor after an already-long and exciting day, it was astonishing that they didn't all fall asleep. Pia Pedersen and Greg Walton also brought along telescopes to use outside, but unfortunately the evening was a bit drizzly and almost completely overcast for the entire time until, of course, we packed up the cars to leave after the kids were being collected. Then in the carpark the large hole in the cloud opened with a good view of Jupiter but no-one was there to look at it! Such is the life of an astronomer. As it was, the sky was predicted to become cloud-free by about 3am, but too late for the clandestine adventure to School X under cover of darkness. *Regards, Peter Skilton*



Public Night August 2nd - The public night last Friday saw 90 visitors at The Briars, plus a fair number of members in attendance. Conditions were surprisingly mild for this time of the year. Jamie Rolfe manned the welcome desk and we had zero unannounced drop-ins this month, which was quite unusual. Trevor Hand gave an updated talk about Jupiter indoors.

Unfortunately the weather was almost completely clouded over all evening, so no telescope usage was possible. Nevertheless, helping outside on the evening were Pia Pedersen, Greg Walton, Peter Skilton, Fred Crump & Bonnie Cass, Robin Broberg, Ben Claringbold, Alan Predjak, Jason Heath, Peter Lowe, John Cleverdon, Anders Hamilton, Jamie Pole, Dave Rolfe and Lara Conway. *Regards, Peter Skilton*



Working Bee August 3rd - On Saturday we had the spot levelled for the shipping container in about 1/2 hour. The truck came with the shipping container facing the wrong way round. The truck driver had to drop it off, then drive around the other end and pick it up. Then he backed the truck up and placed it exactly on the spot. The doors are very tight and hard to shut. May need to oil the hinges. We then moved some items into the shipping container. We also ran a plastic conduit with 3 cables under the path between the small dome and the big shed with a 5 cat, HDMI and video cables. Still need to fill the hole in tomorrow. Now we will be able to send a video straight to the projector from a camera on the telescope. We also cut back trees on the east fence line and removed the tree stump down the field. *Greg Walton*



Working Bee August 4th - On Sunday at the working bee we ground the rust off the shipping container then painted it green to match the club rooms. Phillip cleaned the gutters out and mowed the lawn. We also planted 16 trees beside the path to the toilet and finished the cabling between the small dome and club rooms, so we can now run telescopes and cameras from the club room. Also vacuumed up the spiders and cobwebs in the club rooms and did some sewing on the material cover for the 18 inch telescope. A big thanks to all who helped out. The site and club rooms look great and ready for the up coming events. *Greg Walton*



Scouts viewing night August 6th - We had 36 kids from the 1st Mornington Cubs visit the Briars tonight for an astronomy badge evening. Peter Skilton gave an extended talk because the conditions outside started under almost complete cloud cover then deteriorated to drizzle eventually, precluding any use of the telescopes, with the observatory roof needing to be closed. Fortunately the Cubs were wide awake and full of about 100 questions overall. Outside poised in the vestibule to help with instruments, and also preparing for VASTROC, were Nerida Langcake, Mark Stephens, Phillip Rea, Phil Holt, Mark Hillen, Greg Walton, Pia Pedersen and Fred Crump. Several of the parents promised that their families would visit us at a future public night. *Regards, Peter Skilton*



VASTROC is all wrapped up! Thanks to all the presenters and helpers during the 3 events. Everything seemed to go fairly well despite the dreadful weather. I had only positive comments from the attendees about the presentations so I feel we have successfully merged the APW & Vastroc events. Jamie should have the final figures ready by the AGM in under 2 weeks to confirm on a financial basis as well. Brad Tucker's presentation was excellent and created some interesting discussions during question time & dessert. Hopefully there will be a recording going on our YouTube channel soon. And finally, as posted earlier, we are all wishing Dr Peter Norman the best for his recovery. I am not too sure where the Vastroc baton is going for 2021 but I would expect to find out soon. *Regards, Dave Rolfe*



Well done – and well done to all the volunteers - we couldn't have done it without the efforts of all involved at all levels. For me it was terrific and terrifying all at the same time, but somehow things just kept happening, and we all got there in the end! I've heard nothing but positive feedback so far. *Jamie Pole*

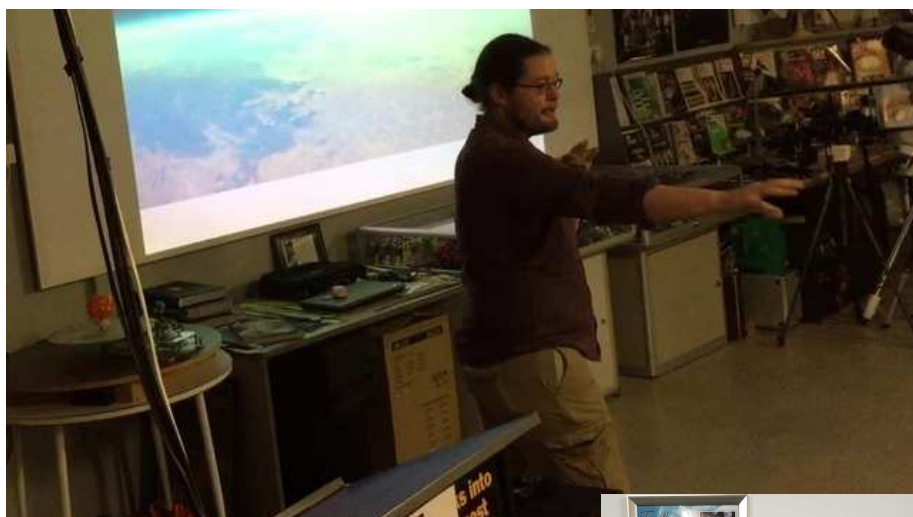


As someone who has convened a few VASTROCs and NACAAs over the years, and been to many more others of them hosted by other societies, I'd say this weekend's went very well indeed. The Convenor is the project manager who has to pull together all the right people at the right time to get it done. And that happened admirably, Dave, so well done! But, like on a big cruise ship, there are many invisible crew involved in the preparation, running, and clean-up of all aspects of the voyage and all should take a well-earned bow. John Cleverdon as our historical chronicler kindly snapped the official group photo on Saturday night, so you'll see those faces and the visitors soon. The final attendance number from the number of name tags produced is probably in the order of 80-90 overall across the weekend but Nerida may have more accurate numbers on those. Yes, the weather was exceptionally wintery and there were many regular speakers and attendees from around the State who were unable to attend due to illness or conflicting travel plans, but it was a very healthy attendance. Given that the interstate keynote speaker wore shorts, short-sleeved shirt and thongs, it couldn't have been really that cold anyway. The one thing you can always expect is the unexpected when you least expect it. *Regards, Peter Skilton*



Peninsula Camera had an impressive display of new cameras, panning heads and motorized rails. Some interesting features are lightning capture which keeps adding the lightning strikes to the same first image while continually displayed on the back of the camera. This feature can also be used for star trails, where you can continually watch the star trails getting long over time. Owner Anthony offers many products and services that the other camera stores don't, including camera classes, film supplies and special printing. All the members' images displayed on the walls in the club rooms were printed by Anthony. Peninsulacamera.com.au

Sidereal Trading also had an impressive display of telescopes, astronomical cameras and accessories. They mostly specialize in the high-end equipment and products for the more experienced astrophotographer, most of which can't be purchased in an ordinary department store. Getting started in astrophotography can be a very expensive and daunting game. So I always suggest talking to as many people as you can before spending any money. Paul Litchen at Sidereal Trading has a wealth of experience in astrophotography and can help you with a complete system or upgrading your current system. Siderealtrading.com.au



Friday night meet-and-greet BBQ went well with more than 30 staying at the camp. After the BBQ the sky cleared so we opened the observatory till 9pm.

Then Ian Sullivan ran the trivia till about 10:30pm. Nobody got a perfect score as some of the questions were very challenging, but we did learn a few more facts. Afterwards, most snuck off the bed. The nature walk Saturday morning had to be cancelled due to the wet conditions, so we were able to sleep in. Proceedings started at 10:30am with the opening address, followed by the APW presentation at the Astronomy Centre and the Vastroc presentations at the camp. Lunch was a do-it-yourself spread and the evening dinner was roast with all the trimmings including crackling and gravy. Keynote speaker Brad Tucker then gave his talk at the Astronomy Centre. Then it was back to the camp for dessert: apple crumble. Disappointingly the rain rarely stopped on the Saturday. Sunday morning some members and participants went to Coolart Science in the Park while others stayed to pack up and clean up. *Greg Walton*



VASTROC /APW photos by John Cleverdon. https://www.flickr.com/photos/john_cleverdon/albums/72157677371347538

MPAS @ Coolart Science in the Park

The sun was shining at Somers during most of the day for Peter Skilton, Greg Walton, Pia Pedersen and myself while we talked to lots of visitors at our busy marquee at the Science Week event. We had two solar scopes set up on the Sun, and then when the Moon appeared in the daytime sky, we pointed another two telescopes in that direction. Inside our marquee we had a few microscopes, an augmented reality solar system jigsaw (which was completed a few times by eager kids), a meteorite, and the Scinema Films showing throughout the day, amongst other fun activities. Pia and I took a walk to get coffee and, somehow, we found ourselves in the OzGrav room wearing VR goggles and bumping into each other as we wandered around the universe viewing planets, moons, black holes and pulsars. Such an amazing experience! There were lots of kids completing the Junior Ranger activity sheets which required them to find things in the park.

Luckily for one of those kids, a boy called Xavier, who was trying to find something that began with the first letter of his name, came into our marquee and found Xenon on the Periodic Table of Elements.

By Nerida Langcake



Frankston Library talk August 14th - Approximately 30 people arrived at Frankston Library for a talk on meteorites as part of Science Week, perhaps 20% of the audience being of primary school age. This was a slightly contracted version of Trevor Hand's meteorite talk he has given many times as part of the regular public viewing nights. I am sure some of the children, and their parents, will have something to talk about today after learning about what meteorites are and where they come from. The expressions on some faces were priceless when they saw what can happen to your car when you leave it parked at night and it gets hit by a meteorite! At the end of the talk a number of people enquired about MPAS and The Briars, so perhaps we will get some new visitors next month. A couple of people had mentioned they had previously visited The Briars for viewing nights.

Mt. Martha Primary School viewing night August 14th - The whole of school science fair for National Science Week at Mt. Martha Primary School proceeded very well tonight, with 400 families at that school and 780 kids in attendance. Fortunately they were spread over a 2.5-hour period so we easily coped with the flow with the number of telescopes brought to bear. There was no talk required for this one, and so it was straight onto the telescopes on the school oval and running track. While it all started cloudy in daylight, as anticipated, this quickly started to dissipate as twilight approached and by about 7:30pm the sky was completely clear. Everyone at one time or another was able to see the nearly Full Moon, Saturn and Titan, and Jupiter and its moons. The evening started with 4 Jovian moons visible, but this soon reduced to 3 as one passed behind the planet. It had even been rumoured that the Principal was ensuring he was first in line at some of the telescopes, and certainly some of the teachers were getting a peek at the end after most of the kids had gone home to bed. Operating their instruments in the field were Ben Claringbold, Fred Crump, Patricia MacLeod, Greg Walton, Pia Pedersen, Nerida Langcake, Piper Grierson, Mark Hillen, Mark Stephens, Phil Holt, Peter Skilton, Joanna Shepherd, Daniel & Jasmine Price, and Simon Hamm. Hopefully I didn't miss anyone in the crowd of members. It was cool, but not noticeably breezy, on the fairly sheltered school oval. The feedback received on the night by the teachers there was that it was a fantastic experience for everyone. *Regards, Peter Skilton*



Society Meeting & AGM August 21st - Saw more than 40 members in attendance. Peter Lowe chaired the meeting and talked about MPAS achievements over the past 12 months. Peter stepped down as president, thanked the out-going committee and handed the meeting over to Peter Skilton who declared all positions open. The election was conducted and names read out of the new committee: Peter Skilton president, Mark Stephens vice president, Nerida Langcake secretary, Jamie Pole Treasurer and ordinary committee members are Anders Hamilton, Trevor Hand, Simon Hamm, Peter Lowe and Dave Rolfe. Peter also talked about up and coming events.

Greg Walton



With the AGM out of the way, our guest speaker, Dr. Ailie Gallant, ARC DECRA Fellow in the School of Earth, Atmosphere and Environment in the Faculty of Science at Monash University, talked on **CLIMATE CHANGE MYTHBUSTERS AND COMMUNICATING UNCERTAINTY IN AN ERA OF SOUNDBITES**.

Her work seeks to characterise and understand climate variability and change on multiple time and spatial scales, primarily for the Australasian and Antarctic regions. Most of her research relates to examining climate extremes, particularly extremes of the hydroclimate such as drought. Her specific research interests include:

* Examining the processes regulating variations in Australian drought *Characterising decadal to multi-decadal scale climate variability in the Southern Hemisphere. *Interpreting variability in the pre-instrumental climate using palaeoclimate data and *Determining dynamical explanations for past climate variability... Ailie is also a passionate climate science educator and communicator as some of you may recognise her from her regular columns in the local newspapers where you live.

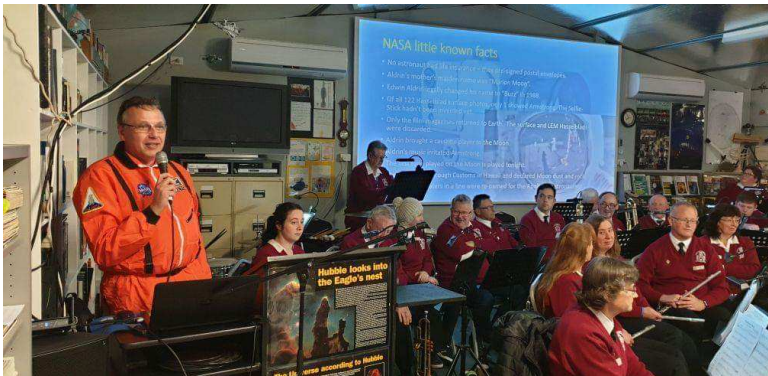
Summary: Facts about climate change and causes have been known for over 100 years. It is complex and can be uncertain, making communicating it to the public difficult. This talk explained the science behind the misconceptions about human-induced climate change and looks at the difficulties communicating it. Facts about climate change and its causes have been known for over a century. However, the nuances of climate change are complex and, in some cases, attached with sizeable uncertainty. This uncertainty makes communicating climate change to the general public difficult. Further, the presence of uncertainty can distort the messages, particularly in an era of fast 'soundbite'-driven news. This talk explains the science behind some of the common misconceptions about human-induced climate change and included the difficulties in communicating the science of climate change in the current media landscape. *Regards, Peter Skilton*



Music of the Heavens



Southern Peninsula Concert Band, playing for MPAS on the 17th of August at our Briars observatory, start time 7:30pm. To celebrate the Moon landing this unique evening for the public featured a selection of space-themed tunes performed live by the Southern Peninsula Concert Band, woven together with informative space talks by the Mornington Peninsula Astronomical Society. Proudly supported by National Science Week, Inspiring Australia, Royal Society of Victoria and the International Astronomical Union. There were also raffle tickets for sale. Bundled in the hamper were: 1st Prize had a small piece of the Moon; 2nd Prize a piece of lunar mineral; 3rd Prize a 3D-printed lunar globe.





The 3rd prize winner of the raffle, Johann Bartolo, was from Mt. Martha, and was one of the parents from Mt. Martha Primary School that we visited last week. He was inspired and hopped online afterwards and bought 10 tickets that night. I will arrange to get that prize to him and his family. The 2nd prize was won by Jill from Bittern who was there on the night, and 1st prize was won by David from Sydney who also was there on the night. We had people from Sydney and Canberra come down for the weekend for the concert especially by word of mouth.

It was interesting to find out that the band had to practice their pieces in the dark so as to get finger placements spot on without needing to look, and had been practising for months. My iPhone recording of the concert just reached the end before the battery ran flat. Its lens FOV wasn't wide enough to see the drummer behind me on one side and the Conductor on the other side, especially as the band seemed to me to have spread out more than at rehearsal. Will go to YouTube once I get a moment to work on it a bit, along with Brad Tucker's VASTROC talk. *Regards, Peter Skilton*



Nerida Langcake, Peter Skilton and Simon Hamm arrived at 4:30pm to lay the foam mats for the band and check the audio and presentation. The Band arrived at 5:30pm to start setting up their instruments and doing their sound check, they sounded awesome. We also had a Bunnings style sausage sizzle (\$2 per snag) which started from 6:30pm. David Ward ran the BBQ while Andes Hamilton fried the onions, Catherine collected the money while Pia Pedersen set up the bread with paper, filled the sauce bottles and ran the kitchen. On the telescopes in the observatory and outside were John Cleverdon, Charlotte Swart, Ben Claringbold, Alan Predjak, Jason Heath, Simon Hamm and myself. Many looked though the telescopes before the concert started at 7:30pm, then at approximately 8:20pm there was a 15 minute intermission for tea/coffee and telescope viewing. The concert finished at 9:30pm with optional tea/coffee with many hanging around telescope viewing till past 11pm. Everybody looked like they were enjoying themselves dressing up as Star Wars characters. A big thanks to all who helped out on the night. *Greg Walton*

MPAS Concert on you tube, by *John Cleverdon*. <https://www.youtube.com/watch?v=a9nea5XSyaA>

MEMBER PROFILE



I'm one of the longer-term members in ASF/MPAS, having joined back in 1990 as a shy Year 9 student.

My interest in astronomy goes back to around 1986, with things like Halley's Comet and the Voyager 2 flyby of Uranus to get me started (I was in Grade 5 at the time). That being said, genealogy research by my father many years back found that the same great-grandfather who was a surveyor and later worked at the Titles Office (perhaps the source of my interest in maps?) also had an interest in astronomy. Back at that time at primary school, an aunt & uncle gave me information about ASF, but being in Dromana (where I still am), I decided it was too far to get to their meetings in Melbourne. So, the interest in astronomy faded for a little bit.

For Christmas 1988 (end of Year 7), the same aunt & uncle gave me a planisphere, and that re-started the astronomy interest. I started off stargazing using my father's 10x50 binoculars.

However, back in those days, the then-ASF was a lot less active than it is now, and so it took around a year before I even heard about it (in a special edition of the Frankston Standard newspaper). Once I did come across this, I got my father to ring then-president Steve Malone in early 1990 (Year 9). After a couple of meetings and members nights (in those days at Moorooduc Airfield – from memory, ASF/MPAS didn't start at the Briars until 1992), I liked it and joined as a result.

With several of those in my year level at Dromana Secondary College being more dubious characters, having a hobby with mature and responsible adults was a beneficial way to grow up in my teens (given that some members were real gentlemen, and made good mentors). Photos from those days can be found at: <https://johncleverdon.neocities.org/photos.htm>

Around that time we were also involved with the Morningside Railway Preservation Society (now the Morningside Tourist Railway), and there was an astronomy 'subgroup' in that at the time, one of these people having built the Peter Norman telescope 30+ years ago.

One of the science teachers at Dromana Secondary College had an interest in astronomy, so in Year 12, he loaned me a home-made camera tracker for astrophotography, which I used with my father's SLR for a family holiday to the Otways for my first attempt at astrophotography (the best of the scanned-in slides are at: <http://www.mpas.asn.au/piwigo/index.php?category/27>).

I didn't get a scope of my own (an old 6-inch Newtonian on a German equatorial mount, bought second-hand) until around 1995-1996, when I was at RMIT University. Prior to that, I was still using binoculars at home / on holidays and checking out other members' scopes at MPAS. Later, I built myself a Dobsonian mount for it to use instead. I had started building an 8-inch Newtonian around the end of secondary college / start of uni but couldn't afford the main mirror at the time (although I still have the parts, so maybe something to think about for the future?).

While boarding in Melbourne when studying at uni, I wasn't able to be as active in MPAS.

Given my interest in maps (which later became my professional background, with a degree in cartography), I learned star-hopping from the early days and am still pretty good at it (the astronomical equivalent of using a Melway instead of a GPS). For star charts, I worked my way up to the Herald-Bobroff AstroAtlas although I also have the detailed SkyMap Pro software (having started off with Skyglobe at secondary college when it came to star chart software).

In recent years, I've used my cartographic skills to produce maps of the MPAS member locations and viewing nights, along with a site plan for the Briars. These can be found in the foyer area at the Briars.

It didn't take long for me to choose deep-sky viewing as my main astronomical interest. One comment to make here is that in my railway hobby, I used to be a train-spotter ;-). At the same time, my deep-sky observing was something similar ('ticking off' deep-sky objects rather than locomotive numbers as I saw them), ending up in an 'unofficial competition' with Renato Alessio for this. At least the 'deep-sky spotting' has a better reputation 8-)

I also did some variable star observations around the end of secondary college; and some sketching during the 1990's, using sketch cards provided by David Girling.

I was on the MPAS committee for 5 years, between graduating from uni and starting the permanent job at Watsons. In that period, the time between contract jobs allowed me to help out more, such as with an early website for MPAS.

Over the years I've also taken many photos of MPAS activities and these can be found online as well as in the photo albums near the projector screen at the Briars.

I'm still a regular at the public stargazing nights and other events such as working bees at the Briars.

The photo of me dates from 2007 and shows my own telescope at a public night, back when I took it to the Briars. As I'm wearing the 'freezer suit' (invaluable for Melbourne's colder nights), it would likely have been in winter.



Regards, John Cleverdon



Handheld Saturn / Moon. Two different length exposures blended (through light clouds) with the Pentax and a 300mm lens. *Dave Rolfe*



I got it too through the horrible clouds, Just! (one pic, not edited) *By Tara Shepherd*

MPAS public Outreach dates.

SEPTEMBER

Sunday 1st, 6:30pm for Strathcona Girls Grammar at Merricks camp. 50 Year 5 girls anticipated. No assistance is needed.
 Friday 6th, 8pm Briars. Public stargazing night. Speaker Trevor Hand.
 Friday 13th, 8pm Briars. Scout/Guides/Cubs night. Speaker Peter Skilton

OCTOBER

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

NOVEMBER

Friday 1st, 8pm Briars. Public stargazing night. Speaker Trevor Hand.
 Friday 8th, 8pm Briars. Scout/Guides/Cubs night. Speaker Peter Skilton.

DECEMBER

Friday 6th, 8pm Briars. Public stargazing night. Speaker Trevor Hand.

★ **New Members Welcome** ★

Angela Joyce

Tham Nguyen and family

Steven Roff

Will Joyce, Jessica Howard and Genesis, Michael & Joseph Kaitara

Mathew Taylor

Steve Wilkins

Anne & Geoff Danne

Rosie & Jabin Hallahan

Gurneet, Harneet, Gurtej & Sukhman Jolly

Michael Scott

John Goodall



MPAS SUBSCRIPTIONS 2019

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 2018 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 2019 fees is:

SOCIETY FEES

Subscriptions can be paid in a number of ways:

- Cash payments to a committee member
- Send a cheque, made out to "Mornington Peninsula Astronomical Society", to MPAS. P O Box 596, Frankston 3199
- Make a direct electronic payment into the society working bank account.

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.

Click on the link for further information - https://drive.google.com/file/d/0ByvkxzZG19g_NXZ4cWxHbERTdEE/view?usp=sharing

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



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

You can now renew your membership online. See link below. Click on Members then JOIN NOW at the bottom of the page. Then just fill in your detail on Try-booking. <http://www.mpas.asn.au/members.html>

CALENDAR		September / 2019					Red Days indicate School Holidays
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
1 Fathers Day	2	3	4	5	6 Public Night 8pm First Quarter	7	
8	9	10	11 ASV Meeting	12	13 Scout Viewing Moon at 406,377km	14 Full Moon	
15	16	17	18 Society Meeting 8pm	19	20	21 Members Night BBQ 6pm	
22 Last Quarter	23	24	25	26	27	28 Moon at 357,802km	
29 New Moon	30						

Monthly EventsMPAS calendar http://www.mpas.asn.au/Calendar_2019.pdf**Public nights** - 8pm start on the 6th @ the Briars**Society Meeting** - 8pm to 10pm on the 18th @ the Briars**Members Night BBQ** - 6pm on the 21st @ the Briars

CALENDAR		October / 2019					Red Days indicate School Holidays
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
		1	2	3	4 Public Night 8pm	5	
6 First Quarter	7	8	9 ASV Meeting	10	11 Moon at 405,899km	12	
13	14 Full Moon	15	16 Society Meeting 8pm	17	18	19 Members Night BBQ 6pm	
20	21 Last Quarter	22	23	24 Scorpius Deadline	25	26 Moon at 361,311km	
27	28 New Moon	29	31	30			

Monthly Events**Public nights** - 8pm start on the 4th @ the Briars**Society Meeting** - 8pm to 10pm on the 16th @ the Briars**Members Night BBQ** - 6pm on the 19th @ the Briars

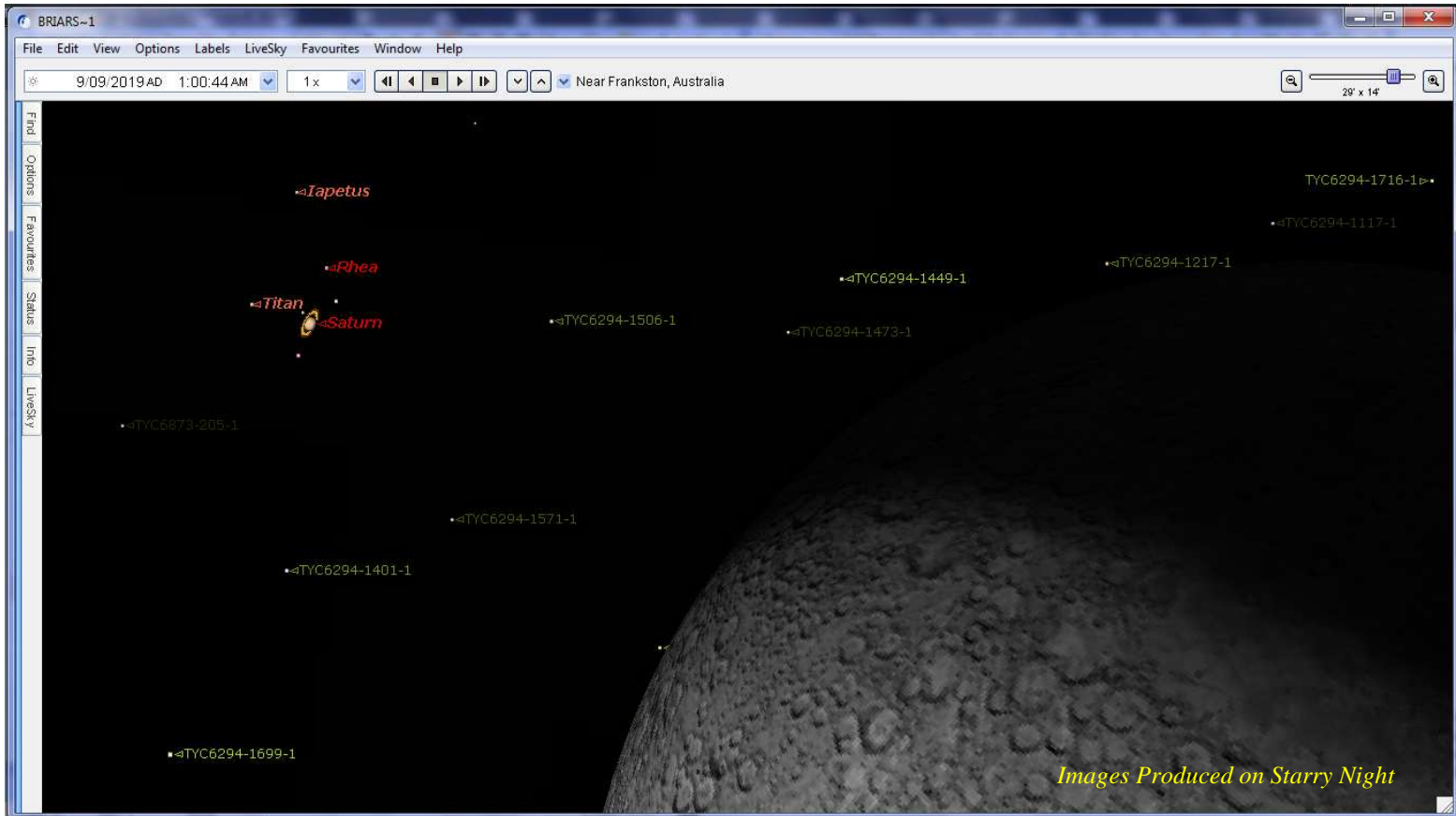
Please... we need helpers to keep the MPAS Observatory open to members on all Saturday nights.
If you can help, contact Greg Walton on 0415172503 or email - gwmpas@gmail.com

THE BRIARS SKY

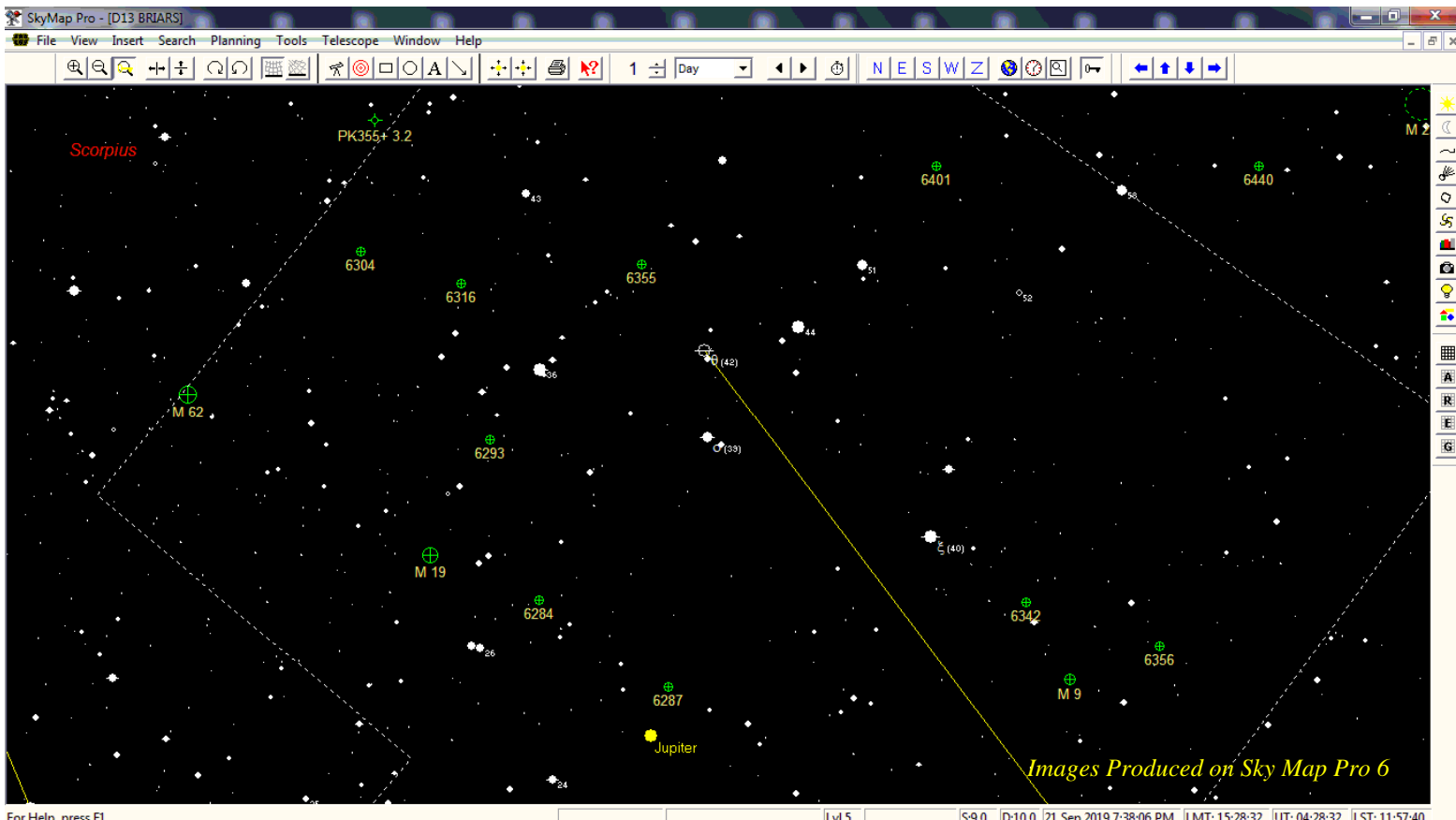
By Greg Walton



Photo opportunities. Saturn next to the Moon on 9th September around 1am.



Around the time of the September members BBQ, Jupiter will be moving through the constellation Ophiuchus and will be surrounded by 13 globular clusters all brighter than 10th magnitude, the field of view is 10 degrees. See how many you can find or image this piece of sky with a 50 to 135mm lens using Jupiter to guide you.



A rare Soyuz test flight

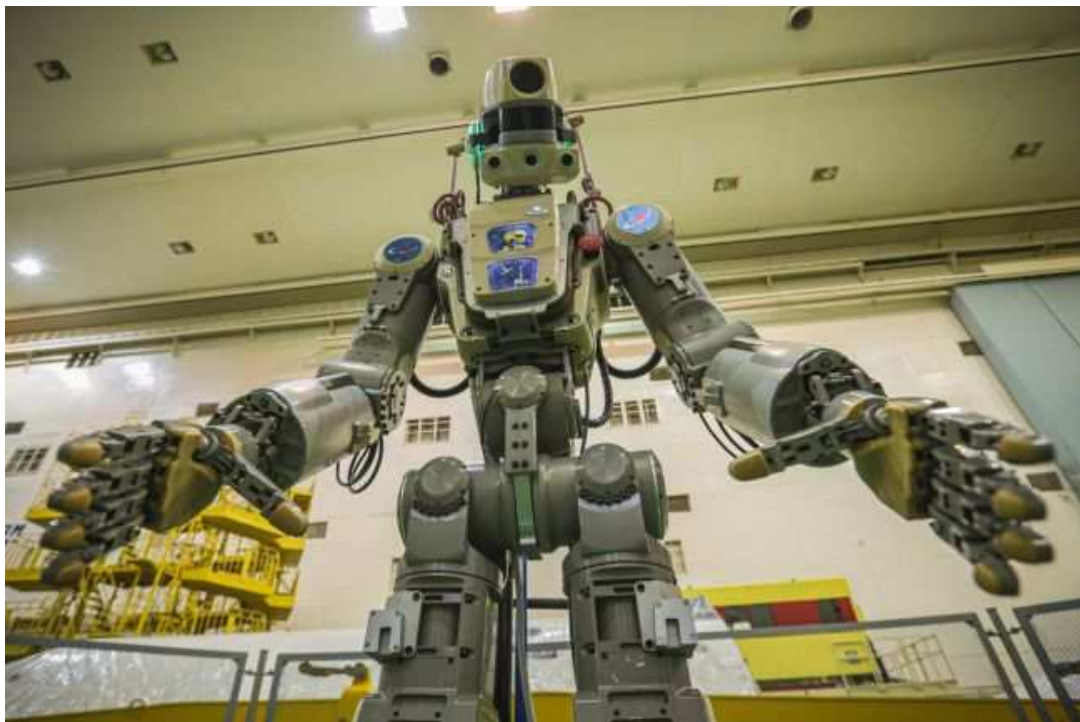
Soyuz MS-14 is the first Soyuz without a crew to ever to visit the International Space Station. Russia launched the spacecraft on a Soyuz 2.1a rocket, a variant of the Soyuz booster that is typically used to fly uncrewed Progress spacecraft. (Soyuz crew capsules have, to date, launched on older Soyuz FG boosters.)

This Soyuz test flight is primarily aimed at testing the compatibility of the crew capsule with the revamped Soyuz 2.1a rocket, NASA officials have said. But while this is a test flight, that doesn't mean Soyuz MS-14 will arrive at the station empty handed.

Packed aboard the Soyuz are 330 kgs of food and other supplies for the six members of the station's current Expedition 60 crew. There is even a robotic passenger aboard: the humanoid Russian robot Skybot F-850.

Roscosmos equipped the robot with sensors to measure how a Soyuz launch on a 2.1a rocket might affect human crewmembers during flight. Cosmonauts on the station will also use the Skybot F-850 for a series of

technology experiments in orbit before packing the robot back into the Soyuz for the return trip home.



Russia's Skybot F-850: A space robot which launched to the International Space Station on a Soyuz space capsule in August 2019. (Image: Roscosmos)

Scientists explore outback as testbed for Mars

Scientists from NASA's upcoming Mars 2020 mission joined their counterparts from the joint European-Russian ExoMars mission in an expedition to the Australian Outback, one of the most remote, arid regions on the planet. Both teams came to hone their research techniques before their missions launch to the Red Planet next summer in search of signs of past life on Mars.

The researchers know that any proof of past life on Mars will more than likely be almost microscopic in size. That's where the Pilbara region of North West Australia comes in. "The Pilbara Outback is home to the oldest confirmed fossilized lifeforms on Earth, called stromatolites," said Ken Farley, project scientist for Mars 2020 at NASA's Jet Propulsion Laboratory (JPL) in Pasadena, California. "If we can better understand how these fossils came to be here—and the nearby geological signposts that help point the way to them—we'll be that much more prepared when hunting for signs of life on Mars."

The field trip was led by Martin Van Kranendonk, a professor of geology and astrobiology at the University of New South Wales in Sydney. "Just as the Apollo astronauts visited areas of geologic interest on Earth before they journeyed to the Moon, the scientists of Mars 2020 and ExoMars are doing their due diligence before their missions make the 160-million-plus-kilometer trip to the Red Planet," said Mitch Schulte, Mars 2020 program scientist at NASA Headquarters in Washington. "Martin helped them by providing a thorough and thought-provoking look into the geologic features of the Pilbara."



The first joint science trip for the Mars 2020 and ExoMars teams concluded on Aug. 24, when the scientists packed up their field notes, folded up their tents and returned to home. But the results from this astrobiology expedition will have positive, long-lasting ramifications in humanity's hunt for evidence that we are not alone in the universe.

The launch window for Mars 2020 opens on July 17, 2020. It will land at Mars' Jezero Crater on February 18, 2021. The launch window for ExoMars opens July 25, 2020. It will land on the Red Planet in March 2021.



I was asked where can I buy a prism which will split white light into the colours of the rainbow. With a bit of searching on the internet I found Mad About Science at 1a/981 Mountain Hwy Boronia Vic.

I happened to be in the area that week so I dropped in to check them out. The shop was small but packed with science stuff mostly for kids. They did have an astronomy section under the stairs.

Not everything is on display as I think most of their business is done on line. They did have the prisms and assorted lenses out the back. I just had to ask.

Also had an R2D2 Droid inventor kit which looked very cool.

Greg Walton



MPAS Gallery

Zodiacal light

Every now and then I reconcile my observatories weather station report on cloud cover with an image from the all sky camera. This was taken around 6am, Eastern Standard Time - Australia, so nearly dawn. You can see two open observatories still imaging, a band of cloud covering from the west to the north horizon [right side and up], and a strange light cone appearing to the top left - north east.

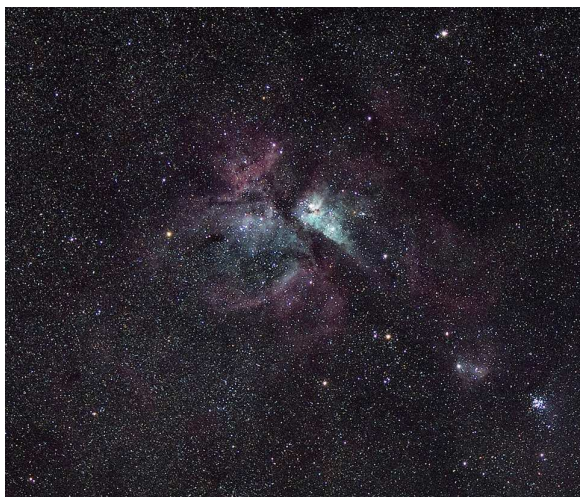
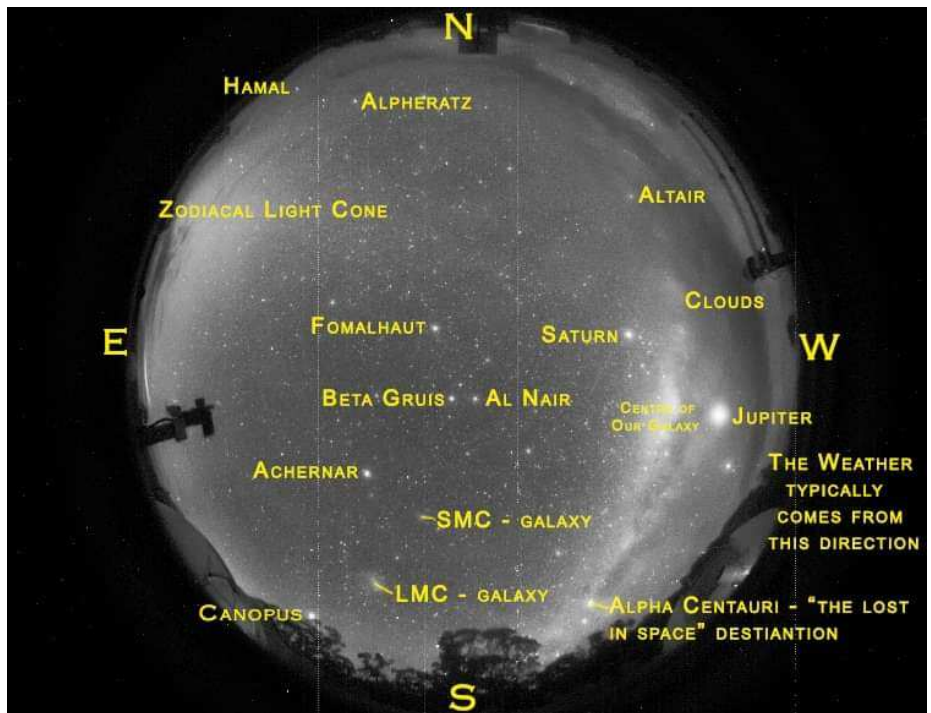
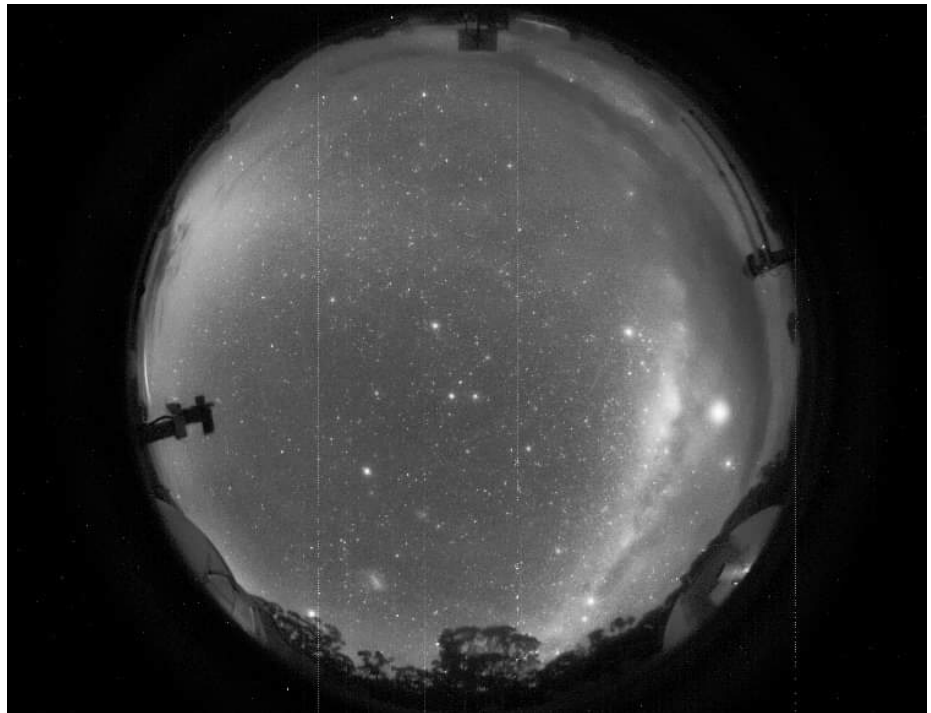
This cone of light is not the approaching of the morning sunrise, but a phenomenon known as the Zodiacal Light. It was so visible, that I thought to share it with you.

I made an annotated version, as there are some interesting bright spots there! Two BIG visible, naked to the eye galaxies that orbit our Milky Way galaxy - Small and Large Magellanic clouds [about 165,000 light years away!], the star the Robison's family was trying to get to - in LOST IN SPACE, and to the west, covered in some cloud, is the constellation Sagittarius and the centre of our galaxy.

Although you can see into the observatories and see the telescope to the lower right inside, to the naked eye, and when night time adjusted, the internals of these observatories look near completely dark. The all sky camera is just extremely sensitive. Even at this near dawn time frame, the horizon is still nearly dark all the way around - Bortle 1 rating.

So there you go! *Steve Mohr*

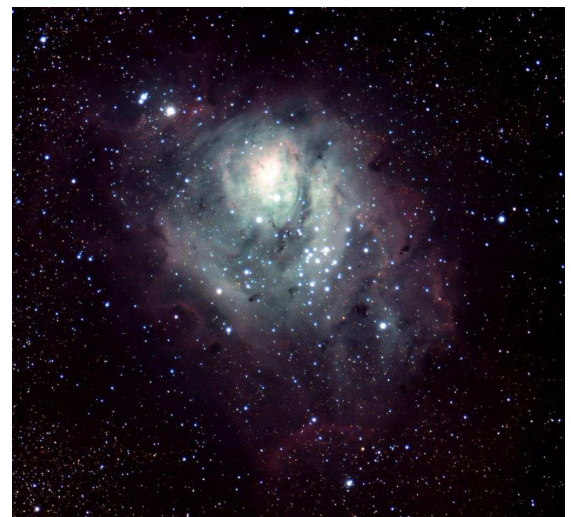
From the WIKI: Zodiacal light (also called false dawn when seen before sunrise) is a faint, diffuse, and roughly triangular white glow that is visible in the night sky and appears to extend from the Sun's direction and along the zodiac, straddling the ecliptic [the path the planets follow across the sky]. Sunlight scattered by interplanetary dust causes this phenomenon. Zodiacal light is best seen during twilight after sunset in spring and before sunrise in autumn, when the zodiac is at a steep angle to the horizon. However, the glow is so faint that moonlight and/or light pollution outshine it, rendering it invisible. https://en.wikipedia.org/wiki/Zodiacal_light



Images by Ben Claringbold

Left - Eta Carina taken with Canon DSLR and 400 mm lens on EQ5 Goto Mount.

Right - M8 Lagoon nebula taken with Canon DSLR and 127mm refractor on EQ6 Goto Mount at the MPAS observatory. Friday 23rd Aug

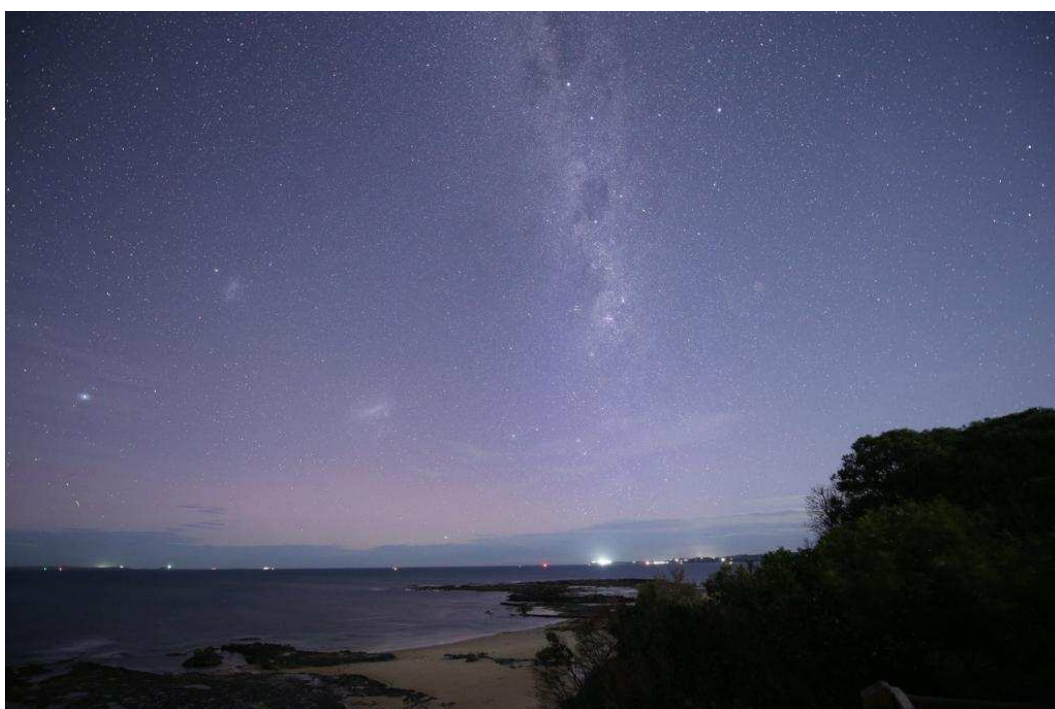




MPAS members dashed to the southern end of the peninsula to snap an aurora.

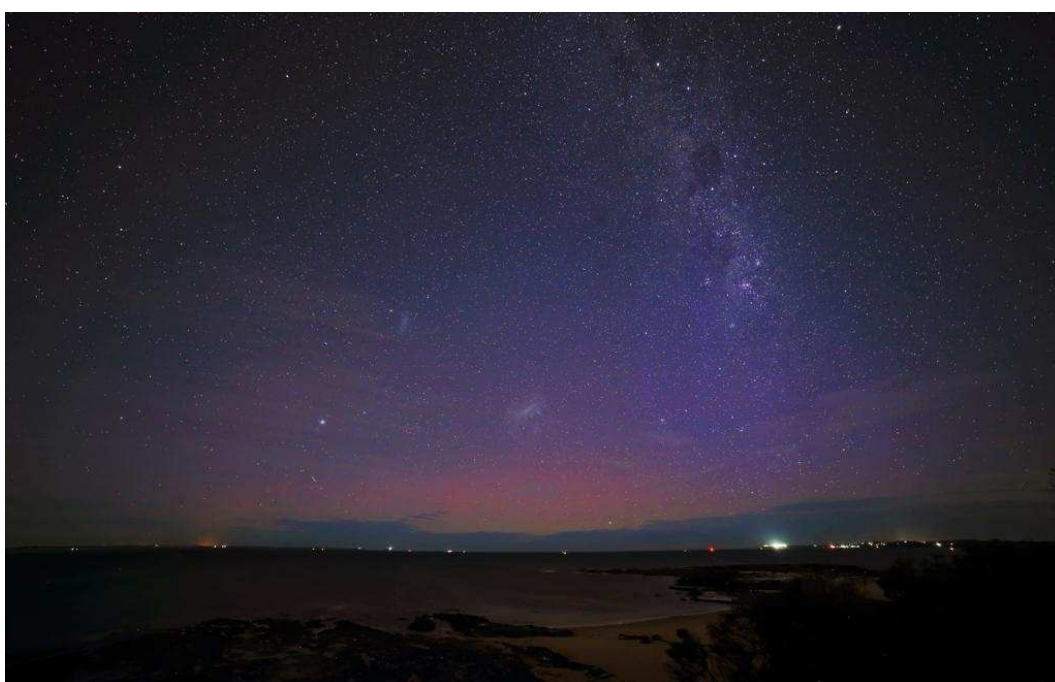
Out with Jamie Pole and Paul Albers tonight hunting the Aurora. This was my first shot (8PM), it faded from here before the clouds rolled in at 9.30. The moon was a hindrance as well, but at least I got some nice colours.

Dave Rolfe



Well The Three Amigos decided to hunt down the Aurora. Dave got the money shot. I managed to get some Crimson. An average night so overall Meh.

Paul Albers



A quick timelapse of the short aurora hunt from Flinders last night with Paul and David. A little action behind the clouds, but most of the show was over 10 minutes before I got there. David got the money shot.

See time lapse video link below
<https://vimeo.com/352172128>

Jamie Pole

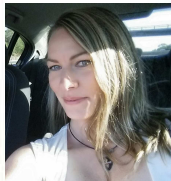
SOCIETY INFORMATION



Peter Skilton



Mark Stephens



Nerida Langcake



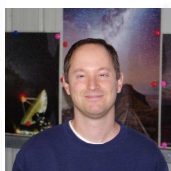
Jamie Pole



Anders Hamilton



Trevor Hand



Simon Hamm



Peter Lowe



Dave Rolfe



Greg Walton

OFFICE BEARERS OF THE MORNINGTON PENINSULA ASTRONOMICAL SOCIETY

President: Peter Skilton
Vice President: Mark Stephens
Committee: Anders Hamilton, Trevor Hand, Simon Hamm, Dave Rolfe & Peter Lowe

Secretary: Nerida Langcake
Treasurer: Jamie Pole
Web master: Rohan Baumann
Scorpius editor: Greg Walton
Librarian: Fred Crump

SOCIETY MEETINGS

Meeting Venue: MPAS Astronomy Centre
 The Briars, Nepean Hwy, Mt Martha
 (Melways ref. 151/E1)

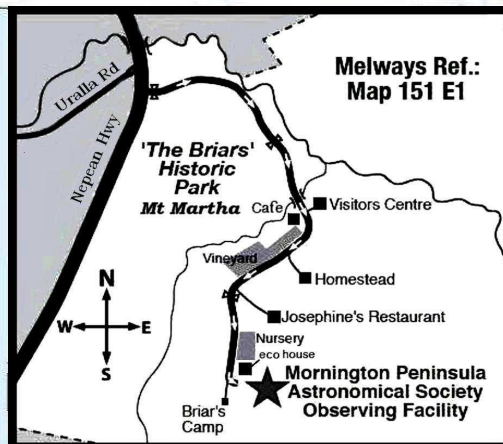
Society meetings: Don Leggett Astronomy Centre
 8pm on the third Wednesday of the month
 (except December)
 (See map at right & Below)



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

Phone: 0419 253 252

Mail: PO Box 596, Frankston 3199, Victoria, Australia



Rohan Baumann



Fred Crump

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

LIBRARY

E-SCORPIUS NEWSGROUP

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

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

VIEWING NIGHTS - MEMBERS ONLY

Viewing Night - Members only
 Any night, at The Briars, Nepean Hwy, Mt Martha, starting at dusk. 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: PO Box 596, Frankston 3199, Victoria, Australia



Members please write a story about your astronomy experiences and add some pictures. Send them to the editor: Greg Walton gwpas@gmail.com

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

SCORPIUS The journal of the Mornington Peninsula Astronomical Society

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