

Cover image - MPAS 2015 Xmas Party Group Photo by Greg Walton



SCORPIUS

THE JOURNAL OF THE
MORNINGTON PENINSULA ASTRONOMICAL SOCIETY INC.

Volume XXV, No 1 (January / February)

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 services of its members for educational presentations and observing nights for schools and community groups. Reg No: A268 ABN: 34569548751 ISSN: 1445-7032



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 © 2015, Mornington Peninsula Astronomical Society

President Report 2015

Yet another orbit has past and the society is moving into the second half of the second decade of the 21st century.

2015 has been a very busy year. Despite the variable weather, which has been less than kind to us this year, we have conducted some 55 events with a record 17 school visits and 25 planned Briers viewing events. Over and above these we held two successful astrophotography seminars and are planning to make these a regular part of our calendar. I must admit the General Meetings this year have been a bit of a mixed bag. While we have been able to arrange a number of excellent guest speakers, they are becoming an endangered species and this will be a challenge for the new committee.

It has been extremely satisfying to see how our volunteers have rallied to activities, particularly the school nights. Viewing nights, both schools and public are a vital part of the society's activities and I know the volunteers enjoy showing off the night sky wonders using their own instruments. I have listed the volunteers at right and want to personally thank them for their efforts particularly on those cold, lonely and cloudy nights. If I have missed anyone please forgive me it's hard to account for everyone in the dark.

Trevor Hand's excellent talks at the public nights and continued to be a draw card for his informative and up-to-date presentations.

2015 Significant Events

- New Horizon Pluto Fly-By Mission (Wow!!)
- Bendigo VASTROC (Strong MPAS showing)
- Lost Beagle 2 lander found on Mars. (It landed but failed to deploy.)
- Guinness World Telescope Observing Event Record. (Go Aussies)
- Astrophotography Seminar (Well Done, Guy's)
- New Zealander Graham Blower dies. A great occultation observer's loss.
- Giant sunspots and numerous auroras.
- Conferring Life Membership on Ian Sullivan for services rendered.

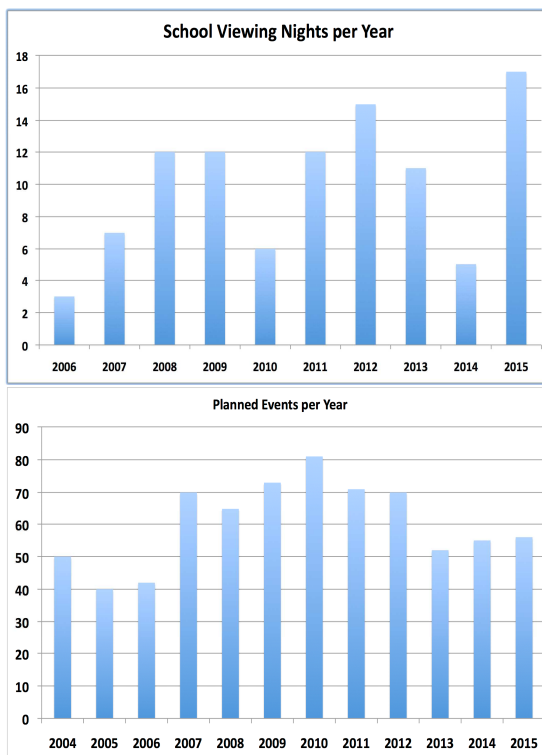
Finally, thanks to the outgoing committee and welcome to the new committee members. The new President and Vice President represent a generational change and I know they will steer the society to a stronger, better future.

Always remember if it's not fun then why are you doing it?

PETER LOWE, President 2015



"Thank you so much for the other night!!! It was absolutely magnificent. I have had so many students and parents saying how fantastic the evening was!!! The presentation was excellent and the members were all so enthusiastic in answering our students/parents questions about astronomy. Please thank your club on behalf of everyone at Parkdale Secondary College Lisa Cooper."



VOLUNTEERS

Paul Albers
Therese Albers
Colin Armour
Melanie Armour
Rohan Baumann
Simon Birch
Rod Brackenridge
David Brackenridge
Ashley Cameron
Charmaine Cameron
Alex Cherney
Kevin Rossiter
John Cleverdon
Robert Dahai
Stewart Gangell
Anders Hamilton
Simon Hamm
Trevor Hand
Bob Heale
Jason Heath
Phil Holt
Peter Lowe
Beverley Maxwell
Harry Maxwell
Sky Murphy
Fiona Murray
Ben Murray
Tony Nightingale
Andrew Nilsson
Pia Pederson
Greg Walton
Jamie Pole
Josh Pole
David Rolfe
Leanne Rolfe
Peter Skilton
Christopher Skilton
Mark Stephens
David Stock
Ian Sullivan
Clemens Unger
Mark Hillin
Jerry Walters
Helmuth Schmultes
Heinz Rummel
Charlotte Swart
Brett Bajada
Bruce Renowden
Alois Dvornik
Roland Knabe
Steve Mohr
Peter Norman
Don Leggett

Sorry if I have missed anyone!

Presidents Report 2016

First I want to say thanks to everyone for their support at the AGM, I know it's a big change for the society. Peter Lowe is remaining on committee and will provide valuable support when required. Hopefully this will give Peter some time to focus on some other ambitions and his health. I know we all appreciate Peter's commitment over the past years.

About myself, I joined MPAS in 2009 coming across from the ASM (Astronomical Society of Melbourne). I have been on committee for a few years and the last few as Vice-President. I also have been a member of the ASV for several years.

My first serious telescope setup was a Vixen SXD and VC200L Combo (yes a goto) so I never had that learning curve of star hopping. I consider myself to be a sucker for technology so don't ask me too many 'where is that' questions!

My interest in Astronomy was always based on imaging and the occasional eyepiece target hopping. I do also enjoy the general meeting talks and showing the public (and schools) the night sky and have been fairly active in doing so. I also usually attend each year various star parties around the country and gather up fellow MPAS members for the expedition.

I work as an Industrial electrician and am often on call so it will be a struggle and juggle with my time. I'm also involved in several other groups :--- Gippsland Gate Radio & Electronics club (GGREC), Eastern & Mountain Districts Radio Club (EMDRC) and Melbourne Jeep Owners Club (MJOC). As you can see I am also active as a HAM radio operator with the advanced call sign of VK3JL. I also like fishing & golf.

My current astronomical equipment is a Vixen Atlux Mount, William Optics FLT132 OTA and a SBIG STL11k Camera (I still have the VC200L). At home in Cranbourne I have a roll-off-roof observatory with an electric lift pier.

The committee positions for 2015/ 2016 are listed on the rear of this magazine and note the next (and future) AGM will be held in July.



Top Right - My First Setup

Bottom Right - My Home Observatory



Above - My old 8" F/12 Refractor 'Big Blue' at the Briars, with Jamie and 'Little Blue'.

Right - The Day my FLT132 Arrived.



Major Goals for 2016

- Overhaul the membership system, with an emphasis on the new-member packs and renewal notifications.
- Establishing a permanent setup observatory at the Briars.

If there is anything you would like discussed at the Committee level, please contact me, as I am more than happy to discuss.

As a side note, I am a science and math's sort of a guy; English was never my strong subject! If there are spelling errors and bad grammar they are unintentional & anyone commenting will be nominated for a job!

Clear Skies, David Rolfe



My C11 I used on my US observing Trip.



Left - My School Night Setup (Explore Scientific ED80).

SOCIETY NEWS

By Greg Walton

Photo below
by John Cleverdon

November public night - Forty one members of the public and Berwick Viewfinders Camera Club visited the Briars, with the latter hoping to connect some of their gear to our telescopes with T-pieces. Alas, it was not to be, with total cloud coverage all evening. Peter Lowe gave a solar system talk, and outside with Peter Skilton was a handful of members only due to competing star parties elsewhere, so fortunately it was poor viewing conditions otherwise we might have struggled with telescopes. Nevertheless, everyone seemed to go home satisfied for the evening. *Regards Peter Skilton*

November Annual Society Meeting - 24 members were in attendance. Peter Lowe (President) chaired the AGM meeting & thanked everybody for their help throughout the year, the treasurer's report showed the club is doing well, then all positions were vacated before the new committee was announced. The new line up is, Dave Rolfe (President), Paul Albers (VP), Peter Skilton (Secretary), Jamie Pole (Treasurer) & Committee Trevor Hand, Fiona Murray, Peter Lowe, Greg Walton & Stewart Gangell. There was no guest speaker. Dave Rolfe talked about MPAS's plans for the new year & asked members for their input over coffee.

November members BBQ - The BBQ was again marred by cloudy skies, but we had a good attendance. Robert gave us a lecture on the weather forecasting website he is creating with Phil Hart. The members were treated again by excellent BBQ skills thanks to Leanne Rolfe. *Paul Albers*

December public night - With only 16 booked, we saw 57 members of the public actually turn up for the Briars public night. There was plenty of high level cloud, but not enough to interfere seriously with viewing. The talk was given by Trevor Hand. Outside helping in the field were David Rolfe, Sky Murphy, Robert Dahni, Peter Skilton, Fiona Murray, Jamie Pole, Kevin Rossiter, John Cleverdon, Peter Lowe, Jason Heath, Alan Predjak, Greg Walton, Paul Albers and Kathryn Hand. Possibly there might have been others present in the dark, but who forgot to sign the observatory log book. As the sky darkened the sky cleared & with No Moon in the sky, everyone got to see a large array of deep sky objects. The public were once again very impressed with the view through the telescopes & the level of commitment of the MPAS members. *Regards Peter Skilton*

December Xmas members BBQ on the 12th - 50 plus members were in attendance. This year it was good to see so many members at the Xmas Party. After the feast, we headed outside for the group photo. Then David Rolfe (President) & Peter Lowe (past President) talked on the future of the society & presented Ian Sullivan with a life membership & an engraved model of Mars floating in the glass sphere... This is for all his time & hard work he has put into the society. Everyone then tucked in to the many desserts on offer. Many thanks to Fiona Murray for setting up the tables & chairs, while Pia decorated the tables. Mark Stephens & Jamie Pole manned the BBQ. Paul Albers supplied 3 snappers, while many members brought along cakes & platters of tantalizing treats. Also Roland & Anna brought along a large basket of cherries from their own trees. Everyone had a great time & as the sky was clear, six telescopes were set up. Many thanks also to all those who helped with the clean up afterwards. We all hope everybody has a safe Christmas & will see you all at the Briars in the new year... Please note January public nights below, *Greg Walton*



PUBLIC NIGHT THANK-YOU

Recent public viewing nights and school viewing nights have continued to be very well received by the attendees. It is no coincidence that this is due to the efforts put in by the members that help out at these events. To everyone that has helped out over the past months, a very big thank-you goes to you all. Your efforts are very much appreciated, and are being very well received.

Please remember we run 3 public nights in January 8th, 15th & the 22nd

New Members

Welcome

Colin Baxter & family

Michael Snehutta & family

Vanessa Bradbury & family

A word from the Scorpius editing team.

Members please write a story about your astronomy experiences and add some pictures.

Send them to:
Greg Walton
gwmpas@gmail.com

Brett Bajada
Peter Lowe
Bruce Renowden

2016 SUBSCRIPTIONS DUE

The ticking over of the New Year also means that society fees are now due to be paid. The society has worked hard to ensure that 2016 fees are still the same as last year's prices. So to assist the society in maintaining the facilities and service we provide, we appreciate your prompt payment for the 2015-year ahead.

As a reminder, the following structure of the fees are:

SOCIETY FEES

Subscriptions can be paid in a number of ways:

- Direct Cash payments to a committee member
- Send a cheque or mail order to the society mail box 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.

Under the new government regulations, a list of financial member is required for insurance purposes, so please make certain your membership renewals are on time.

New MPAS Membership Fee Structure

We are establishing new membership and renewal guidelines for the MPAS to streamline our process. The main change will be that memberships are for the duration of the calendar year, as opposed to 12 months from the anniversary of sign-up. We acknowledge during 2016 some members may be disadvantaged for which we regret, but to improve our society this is unavoidable.

The new structure will be as follows;

- (1) Payment before End of March, 100% category fee will be for current calendar year.
- (2) Payment from 1st of April to End of September 50% fee for the remainder of year. (pro-rata period)
- (3) Payment after 1st of October, 100% fee will be for following calendar year.

From next year all society fees will be due at the end of the year making the renewal process more streamlined and efficient. The 5 Year membership option will also be adjusted for the end of year date with June 30 being the cut-off.

Ian Sullivan Life Membership Citation by Peter Lowe

Life membership is a distinguished service award presented in recognition for a member who has rendered sustained and distinguished voluntary service in accordance with the society's aims.

Ian Sullivan has been involved with amateur science and astronomy as a professional teacher for many decades and has contributed in that arena across the entire Australian amateur astronomy scene. After a long service as an ASV council member and section head he joined the Astronomical Society of Frankston (later MPAS) in Aug 2000 and became actively involved in the society's recreational and scientific pursuits.

During this period: -

- He has been a member of the MPAS committee serving in the role of librarian, collating and organizing the society's book collection and in recent years has managed the procurement of guest speakers for the General Meetings.
- He has been a member of the organizing committee of one local NACAA and two VASTROC conventions, presenting research papers at all these events and additionally presenting papers at similar events around Australia.
- His current role on committee is organizing the general meeting speaker program, a particularly difficult role as potential speakers have become less available.
- He has conducted astronomy classes for several years at the local libraries and is currently an astronomy lecturer at the University of the Third Age.
- He is a prolific Eclipses Chaser traveling to continents around the world to witness and record these rare and exciting events.
- His personal researches into astronomical history have been combined with his global travel to collect, record and expand the details of astronomical history. His presentations on astronomical history are both informative and insightful.

Ian has been and continues to be a valuable contributing member of MPAS with a long history of active participation in the advancement of the society's goals.

Presentation Speech by Peter Lowe

It is great pleasure for me to speak about this conferral. Life membership is not an achievement award. It is the recognition of significant and sustained contribution across the entire range of the society's constituted aims.

Over its nearly fifty years of existence, the society (ASF and MPAS) has conferred only five life memberships.

The first was Clive Palmer and his wife Dale (both now deceased) for sustained service managing the society's financial business and their participation in the incorporation of the ASF.

Dr. Peter Norman for sustained service as President and other offices in developing the society's first permanent observatory at the Monash University Frankston Campus. Despite being legally blind Peter continues to support the society as best he can at general meetings and is a consistent presenter of research papers at NACAA events.

Don Leggett for sustained service as Secretary and other roles including the enormous efforts over several years in organising the construction of the Briars Astronomy Centre and managing the logistics of the highly successful (and highly profitable I might add) 2006 NACAA

Finally, Greg Walton for consistent service maintaining and developing the Briars Astronomy Centre and lending his engineering expertise in the provision of instruments for members use. Additionally in recent times Greg has taken on the Editorial duties for the Scorpius online magazine, arguably the best astronomical society magazine in Australia.

Although Ian joined the MPAS in 2000, he already had a long history with the ASF and the ASV in which he is also a life member. Fortunately for us he rejected the power of the dark side and came back into the light and joined the ASF.

Ian and I have been somewhat renowned for our public adversarial yet friendly astronomical discussions in which of course I was always right and he was always wrong. I've always benefited from our exchanges and that's what makes Ian such an enjoyable astronomical companion, teacher and friend.

From my viewpoint I've always regard Ian as a friend and a mentor. In particular I have always been impressed with his approach to life. The British actor Andrew Sachs famously said, "Death is more universal than life because everyone dies but not everyone lives." Ian is one of the people I know who has most definitely tried to live life.

Ian is best described as a Man of Projects. At any one time he has several projects in hand both short term and long term. One project I particularly like is his project to visit every continent before age catches up with him and as you can see he is still going strong. He has travelled overseas with his wife Elvira all over the world chasing down eclipses, astronomical history and personal enigmas. His reputation is well established both locally and nationally.

It is with great pleasure that I now call upon the President to confer his life membership with this commemorative gift.



Above Photo by Greg Walton

CALENDAR		January / 2016				
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31					1 New Years Day Jupiter below the Moon	2 Last Quarter Moon 404,277 km
3	4 Mars right of the Moon	5 Venus, Saturn & Antares	6	7 Venus & Saturn right of the Moon	8 Public Night 8pm	9 ASV Meeting Venus & Saturn 0.5 deg apart
10 New Moon	11	12	13	14	15 Public Night 8pm Moon 369,619 km	16
17 First Quarter	18	19	20 Society Meeting 8pm	21	22 Public Night 8pm	23 Members Night BBQ 6pm
24 Full Moon Australia Day	25 Australia Day Holiday	26	27 Committee Meeting 8pm	28 Jupiter left of the Moon	29	30 Moon 404,533 km

Monthly Events & High Lights. Red Days indicates School Holidays
Public nights 8th, 15th, 22nd, 8pm start - **Society Meeting** at 8pm on 20th @ the Peninsula School
Members Night BBQ 6pm at the Briars 23rd
Evening - Jupiter below the Moon on the 1st
Dawn - Venus & Saturn 0.5 deg apart on the 9th

CALENDAR		February / 2016				
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Last Quarter Mars right of the Moon	2 Mars above of the Moon	3 Mars below star Zubenelgenubi	4 Saturn right of the Moon	5 Public Night 8pm	6 Venus & Mercury right of the Moon
7 Venus & Mercury above the Moon	8 Europe shadow transit on Jupiter 11:00pm	9 New Moon	10 ASV Meeting	11	12	13 Callisto shadow transit on Jupiter 9:30pm
14 Valentines Day	15 First Quarter	16	17 Society Meeting 8pm	18 Io shadow transit on Jupiter 12:15am	19	20 Members Night BBQ 6pm TLD 1pm
21	22 Jupiter's moons in interesting configuration	23 Full Moon	24 Planning Committee Meeting 8pm Jupiter left of the Moon	25	26	27
28 Jupiter near opposition						

Monthly Events & High Lights.
Public nights 5th 8pm start - **Society Meeting** at 8pm on 17th @ the Peninsula School
Members Night BBQ 6pm at the Briars 20th
TLD - Telescope Learning Day Workshop 20th February @ the Briars 1:00 pm
Evening - Jupiter left of the Moon on the 24th - Look out for shadow transits on Jupiter this month 8th,13th & 18th
Dawn - Venus & Mercury right of the Moon on the 6th - Saturn right of the Moon on the 4th

Astronomy 2016-year books can be purchased @ \$23 for members.



Mornington Peninsula Astronomical Society - 2016 Calendar

Day	January	February	March	April	May	June	July	August	September	October	November	December	Day
1	F New Years Day	M	T	F Public Night	Su	W	F Public Night	M	Th ●	S ●	T Cup Day VicSouth	Th	1
2	S	T	W	S	M	Th	S	T	F Public Night	Su Daylight Savings Starts	W	F Public Night	2
3	Su	W	Th	Su Daylight Savings Ends	T	F Public Night	Su	W ●	S	M	Th	S	3
4	M	Th	F Public Night	M	W	S	M ●	Th	Su Fathers Day	T	F Public Night	Su	4
5	T	F Public Night	S	T	Th SPSP	Su ●	T	F Public Night	M	W	S	M	5
6	W	S	Su	W	F SPSP Public Night	M	W	S	T	Th	Su	T	6
7	Th	Su	M	Th ●	S SPSP ●	T	Th	Su	W	F Public Night	M	W ASV Meeting	7
8	F Public Night	M	T	F	Su SPSP Mothers Day	W ASV Meeting	F	M	Th	S	T	Th	8
9	S	T ●	W ● ASV Meeting	S	M	Th	S	T	F	Su	W ASV Meeting	F	9
10	Su ●	W ASV Meeting	Th	Su	T	F	Su	W ASV Meeting	S APWS 1pm	M	Th	S Members Xmas Party	10
11	M	Th	F	M	W ASV Meeting	S	M	Th AC	Su	T	F Remembrance Day	Su	11
12	T	F	S	T	Th	Su	T	F	M	W ASV Meeting	S	M	12
13	W	S	Su	W ASV Meeting	F	M Queens Birthday	W ASV Meeting	S	T	Th	Su	T	13
14	Th	Su Valentines Day	M Labour Day	Th	S	T	Th AC	Su	W ASV Meeting	F	M	W ○	14
15	F Public Night	M	T	F	Su	W MPAS Meeting 8pm	F	M	Th AC	S Society Dinner	T ○	Th	15
16	S	T	W MPAS Meeting 8pm	S	M	Th AC	S	T	F	Su ○	W MPAS Meeting 8pm	F	16
17	Su	W MPAS Meeting 8pm	Th St Patricks day	Su	T	F	Su	W MPAS Meeting 8pm	S ○	M	Th	S	17
18	M	Th	F	M	W MPAS Meeting 8pm	S Members Night 6pm	M	Th ○	Su	T	F	Su	18
19	T	F	S Members Night 6pm	T	Th	Su	T	F	M	W MPAS Meeting 8pm	S Members Night 6pm	M	19
20	W MPAS Meeting 8pm	S TLD 1pm MembersNight	Su	W MPAS Meeting 8pm	F	M ○	W MPAS AGM 8pm	S Members Night 6pm	T	Th	Su	T	20
21	Th	Su	M	Th	S MembersNight	T	Th	Su	W MPAS Meeting 8pm	F	M	W	21
22	F Public Night	M	T	F ○	Su ○	W Committee	F	M	Th	S Members Night 6pm	T	Th	22
23	S Members Night 6pm	T ○	W ○ Committee	S Members Night 6pm	M	Th	S Members Night 6pm	T	F	Su	W Committee	F	23
24	Su ○	W Planning Committee	Th	Su	T	F	Su	W Committee	S SD 1pm Members Night	M	Th	S	24
25	M	Th	F Good Friday NACCA	M ANZAC Day	W Planning Committee	S	M	Th	Su	T	F	Su Xmas Day	25
26	T Australia Day	F	S Easter NACCA	T	Th	Su	T	F	M	W Committee	S	M Boxing Day	26
27	W	S	Su Easter NACCA	W Committee	F	M	W Committee	S	T	Th	Su	T Xmas Day Holiday	27
28	Th	Su	M Easter NACCA	Th	S	T	Th	Su	W Planning Committee	F VicSouth	M	W	28
29	F	M	T	F	Su	W	F	M	Th	S VicSouth	T ●	Th ●	29
30	S		W	S	M	Th	S	T	F	Su VicSouth	W	F	30
31	Su		Th		T		Su	W		M VicSouth Halloween ●		S New Years Eve	31

Yellow Boxes - MPAS Meeting @ the Peninsula School 8pm

Green Boxes - Public nights @ the Briars 8pm

Blue Boxes - Members Only nights @ the Briars 6pm

Pink Boxes - Committee meetings @ the Briars 8pm

Gray Boxes - Weekends & Public Holidays

Orange Boxes - ASV General Meeting @ the Herbarium Melbourne 8pm

Autumn Equinox - March 20
Winter Solstice - June 21
Spring Equinox - September 23
Summer Solstice - December 21

Full Moon ○ New Moon ●

Bold Under lined Days
School Holidays

Working Bees will be Noted in the calendar in Scorpius News Letter

AC - Night Time Astronomy classes

16th June, 14th July, 11th August & 15th September @ the Briars 8pm

NACCA 2016 - Sutherland society 25th - 28th March www.nacaa.org.au
South Pacific Star Party 2016 - Ilford NSW 5th - 8th May www.asnsw.com/spsp
VicSouth 2016 - Nhill Victoria 28th October - 1 November

Border stargaze 2016 - to be confirmed around science week August

MPAS Calendar 2016 - by Greg Walton

New Victorian Public Holiday Grand Final Day 2016 - Some time in October

Sky for the Month we will look at Double stars.

Hunting double stars can be very rewarding.
Many double stars can be split with a pair of binoculars.

My favourite would be Alpha Centauri - very bright, but very close together... certainly needs a telescope with a long focal length and 100 times magnification, or more, to split them. For me the smaller of the two has a pink look to it.

When I do a star alignment with my EQ6 Goto mount, I try to use Alpha Centauri or Alpha Crux, as they are easily recognizable. If it's not a double star then it is the wrong star!

I found this chart below on the web to get you started.



Name	RA (2000.0)	Dec.	Const.	Magn. A	Magn. B	Sep.	Pos. angle	Colours	Common Name	View
β Tucanae	00 ^h 31.5 ^m	-62° 58 ^m	Tucana	4.4	4.8	27.1''	169°	white - yellow		
ψ 1 Piscium	01 05.6	+21 28	Pisces	5.6	5.8	30.0	159	white - white		
χ Ceti	01 49.6	-10 41	Cetus	4.8	4.8	183.8	250	yellow - yellow		
κ 1- κ 2 Tauri	04 25.4	+22 18	Taurus	4.2	5.3	339	173	white - white		
θ 1- θ 2 Tauri	04 28.7	+15 52	Taurus	3.4	3.8	337.4	346	orange - white		
σ 1- σ 2 Tauri	04 39.3	+15 55	Taurus	4.7	5.1	431.2	193	white - white		
γ Leporis	05 44.5	-22 27	Lepus	3.7	6.3	96.3	350	yellow - orange		
γ Velorum	08 09.5	-47 20	Vela	1.9	4.2	41.2	220	blue - blue	Regor	
κ Volantis	08 19.8	-71 31	Volans	5.4	5.7	65.0	57	white - blue		
ι Cancri	08 46.7	+28 46	Cancer	4.2	6.6	30.5	307	yellow - orange		
53-55 Cancri	08 52.5	+28 17	Cancer	5.9	6.2	240		red - yellow		
27 Hydrae	09 20.5	-09 33	Hydra	5.0	6.9	229.4	211	orange - yellow		
γ -40 Leonis	10 20.0	+19 51	Leo	2.2	4.8	1440		orange - yellow	Algieba	
α Crucis	12 26.6	-63 06	Crux	0.8	4.9	90.1	202	blue - blue	Acrux	
γ Crucis	12.31.2	-57 07	Crux	1.6	6.7	110.6	31	red - white	Gacrux	
ζ -80 Ursae Majoris	13 23.9	+54 56	Ursa Major	2.3	4.0	708.7	71	white - white	Mizar - Alcor	
α Centauri	14 39.6	-60 50	Centaurus	0.0	1.2	14.1	222	yellow - orange	Rigel Kentaurus	
μ 1- μ 2 Bootis	15 24.5	+37 23	Bootes	4.3	6.5	108.3	171	white - yellow		
ν 1- ν 2 Bootis	15 31.2	+40 52	Bootes	5.0	5.0	600		orange - white		
α 1- α 2 Librae	14 50.9	-16 02	Libra	2.8	5.2	231.0	314	white - yellow	Zubenelgenubi	
ω 1- ω 2 Scorpii	16 07.0	-20 46	Scorpius	3.9	4.3	840		blue - orange		
ν Scorpii	16 12.0	-19 28	Scorpius	4.3	6.8	41.1	337	blue - blue		
16-17 Draconis	16 36.2	+52 55	Draco	5.4	5.5	90.3	194	white - white		
δ 1- δ 2 Apodis	16 20.3	-78 42	Apus	4.7	5.1	102.9	12	red - orange		
μ 1- μ 2 Scorpii	16 52.0	-38 02	Scorpius	3.0	3.5	300		blue - blue		
ϵ 1- ϵ 2 Lyrae	18 44.3	+39 40	Lyra	4.7	4.6	173	207.7	white - white	Double double	
ζ Lyrae	18 44.8	+37 36	Lyra	4.3	5.9	43.7	150	white - yellow		
α -8 Vulpeculae	19 28.7	+24 40	Vulpecula	4.4	5.8	413.7	28	red - orange	Anser	
β Cygni	19 30.9	+27 58	Cygnus	3.1	5.1	34.4	54	orange - blue	Albireo	
μ 1- μ 2 Pavonis	20 00.9	-66 56	Pavo	5.3	5.7	540		orange - orange		
15 Sagittae	20 04.1	+17 04	Sagitta	5.9	6.8	203.7	320	yellow - white		
α 1- α 2 Capricorni	20 18.1	-12 33	Capricornus	3.6	4.2	377.7	291	orange - yellow	Al Giedi	
γ Equulei	21 10.3	+10 08	Equuleus	4.7	5.9	352.5	153	yellow - white		

MPAS at Vic-South 2015 Star Party in the Little Desert Nation Park, *by Greg Walton*

This event is run jointly by the astronomical society of Victoria and the astronomical society of South Australia. Thursday, the day before the event started, the heavens opened up & it rained all day; this did not look good. Friday morning, the rain had stopped, so Pia & I, full of optimism, set off driving under 100% cloudy skies. Normally it take about 5 hours to drive to the Little Desert from the Mornington peninsula, but due to many junk shops along the way, we didn't get there till 5pm... Luckily as we approached Nhill, the skies cleared. We signed in & set up camp, then set up the telescope & time lapse cameras on the viewing field. This year, astrophotographer were told to set up on the south end of the field, with visual astronomers setting up on the north end of the field. But this did not suit everybody, as there was a prediction for an aurora on Friday & Saturday. I set up my time lapse cameras on the northern end pointing south, before it got dark switched them on, then just walked away, hoping not to ruffle any feathers. The sky was clear till 2am when thick cloud rolled in. In the morning I checked the cameras & found that the sky went green, from solar activity.

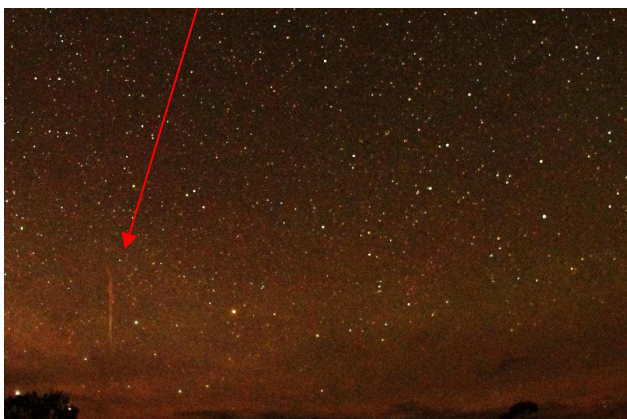
Saturday I left the cameras in the same spot, pointing south & again, switching them on before dark. I then set up my 80mm refractor telescope & searched the sky to find how many galaxies I could see. As it got dark I heard someone yell out aurora, but I did not check my cameras till morning - and yes I got an aurora, also capturing some very bright meteors with smoke trails. See below ...



See Video link below

VS 2015 <https://vimeo.com/145366390>

Right - Bright flash produced by meteor. →
Below - Smoke trail produced by meteor.





SDM 24 inch Dobsonian

Above - Sky-Watcher provided an 8 inch Dobsonian telescope as the door prize, they also demonstrated some new produces including the new 18 inch Goto Dobsonian telescope which run faultlessly on Friday & Saturday. Its skeleton design made it light-weight & portable. We were told it will have a \$7,500 price tag. Interestingly the Sky-Watcher agent said they sell 4,000 telescope per year in Australia.

The viewing field was graced with many large Dobsonian telescopes including a 24 inch Goto built by SDM's Peter Read. The had owner travelled from Tasmania for this event. Every night it attracted quite a crowd of eager astronomers & I had to hurry some people up so I could get a look! I helped find the Horsehead Nebula & it was very noticeable in this monster using an hydrogen alpha filter.

The major speaker was comet hunter, Terry Lovejoy. He told us how he finds his comet, by systematic imaging strips of the same morning sky with telescopes, using software he had developed. Then he used software to compare the images from 3 consecutive days looking for any objects that have moved against the starry back ground. He then reports any comets to the professional astronomers. He said now it's almost impossible to find a comet visually, with so many automatic telescopes in operation.





Above - ASV member built this beautifully crafted device which converts longitude & latitude (coordinate from a star chart) to Right-Ascension & Declination (degrees from north & degrees above the horizon) ... This is the second that Norman has built.

Right - An impressive array of instruments at the astrophotography end of the field.

Below Right - My time lapse cameras awaiting the night.

Bottom - Emu at Little Desert Nation Park



Sunday night was totally free from clouds, making it hard for those who were hoping for an early night. I bombed out at 2am.

Everyone had a great time & I hope to see you all there next year.



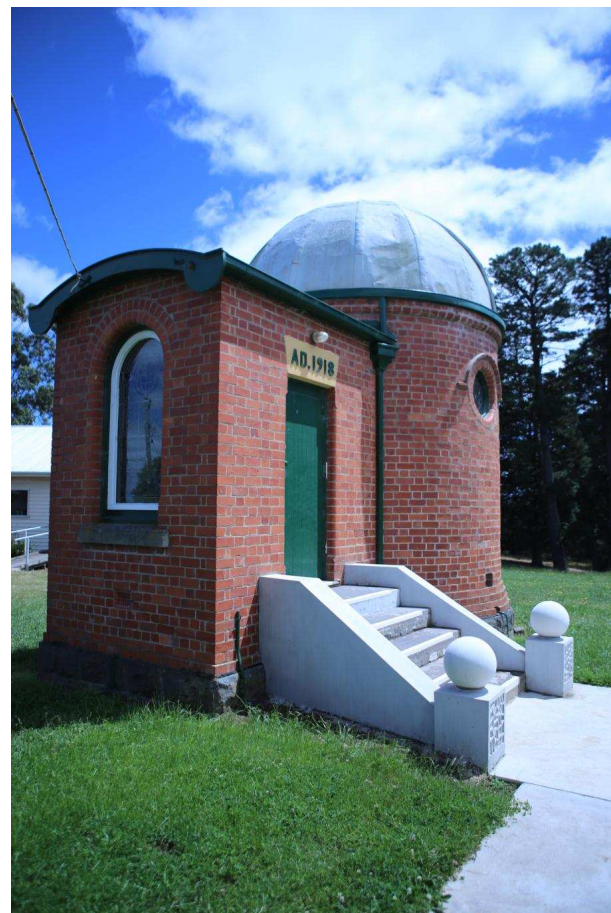
The latest Snake Valley Astronomy Camp was held on the weekend of November 6th-9th 2015.

It was a well-attended camp with approximately 44 booked in for the weekend, (I think about 40 attendees in the end). Although the camp was on the same weekend as the ASV VicSouth – Little Desert event – it was still very well attended.

A two person contingent from MPAS – including myself and Anders Hamilton attended. We had some ok weather (clouded out on night one, and clear skies until about 3:00am on night two – I only stayed the Saturday and Sunday nights). We saw some Aurora Australis action (photo attached showing some red and crimson in the skies from our imaging position), attended a tour of the Ballarat Observatory, and viewed a few of their old and new scopes, Had an Astrophotography presentation from Andrew Campbell, and generally enjoyed each other's company and had a great time.

I'd recommend the Snake Valley Astronomy camps for anybody who hasn't attended one before, as the people are very friendly, the accommodation is basic but good (bunks to sleep in, shower block, and kitchen facilities, or you can camp), there is ample help on hand for beginners, and quite a few scopes to look through for the visual people. Suitable for beginners through to astro imagers.

By Jamie Pole



Above - The Old Refractor (complete with clockwork drive) in the Brick Observatory

Above right - One of the old Brick Observatory Buildings which houses the old Refractor

The Snake Valley Camp website can be found at <http://www.snakevalleyastrocamps.org/>

The next astronomy camp is likely to be on the Labour Day long weekend in March 2016

A few more photos from Snake valley:

Right - The Large Scope under the Roll off Roof.

Middle Right - The Roll off roof for the Large Scope.

Below - One of the Scopes at the Ballarat observatory (this one has a constant eyepiece position for disabled and wheelchair access – some complex optical trains by Barry Adcock)

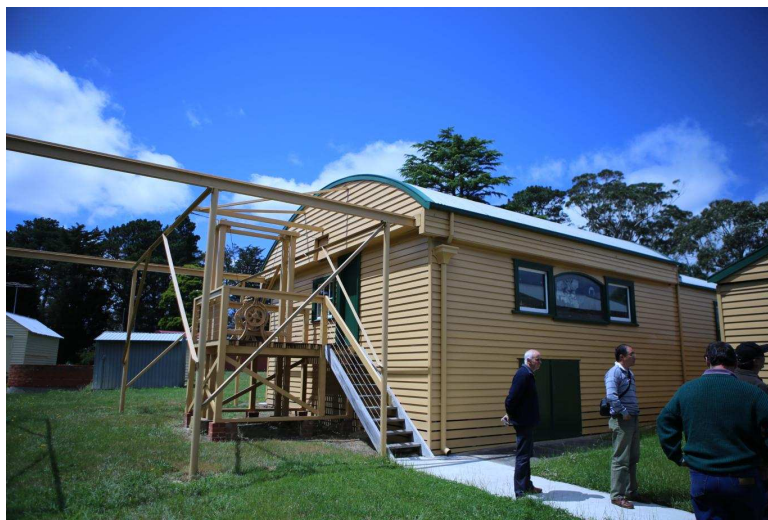
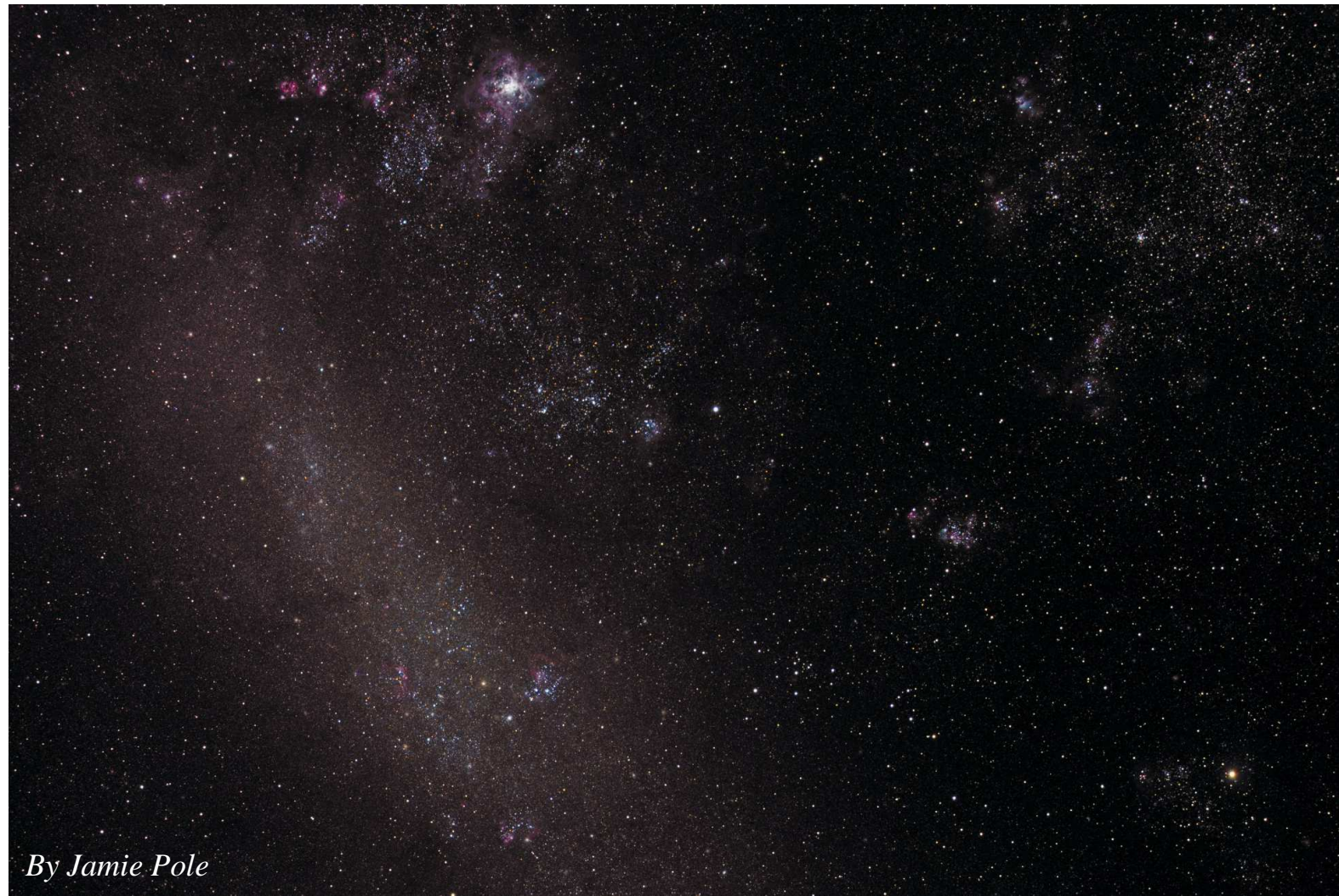


Photo below - showing some red and crimson in the skies from our imaging position. *By Jamie Pole*



By Jamie Pole

Below - LMC imaged from the same scope/camera in the first photo (above page)



By Jamie Pole



Jamie Pole - 25th October 2015 10:30pm
Some lightning from our place tonight (stack of 3 shot)

Building an observatory,

One of the problems with astronomy is the cool nights & having to setup your telescope each time you want to use it.

It would be nice if we could turn a key & flick a switch, then start viewing or imaging the night sky. Also if the clouds roll in, is just a matter of closing the roof & switching off the power.

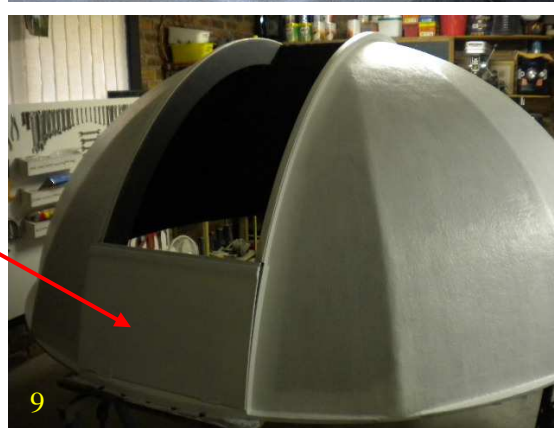
Building an observatory is not a five minute job, it takes much planning & many hours work.

Troy, built his observatory from ply wood & fibre glass, as only a few hand tools are needed (Router & Drill)

With a job like this it's best to break it down in to stages.

First build the dome roof.
 Second build dome support.
 Third build the walls.
 Forth build the floor.
 Fifth build the stand.
 Sixth put it all together.

Rather than give a blow by blow description of the building process, we thought it best, to use a series of photos in order as the construction took place. With just a few pointer along the way.



1. Cutting the frame from ply wood.
2. Finding wheels for the dome to turn on.
- 3&4. Assemble dome frame.
5. Cut insulation for dome.
- 6&7. Dome gets ply wood coating.
8. Dome gets fibre glass coating.
9. Lower flap swings down.
10. Finished painted dome.

11. Shows how the roof hatch is operated with a cord, pulleys & small witch.



12



13



14

- 12. Frame for the dome support ring.
- 13. Dome support ring gets ply cover.
- 14. Dome support ring gets fibre glass coating.
- 15. Dome & finished dome support ring assembled.
- 16. Frame for the walls.
- 17. Walls get ply cover.
- 18. Walls get door.
- 19, 20 & 21. Walls get frame for floor.
- 22. Frame for floor gets painted.
- 23. Floor goes in.
- 24. Hinged hatch in floor gets fitted, for easy access.



15



16



17



18



19



20



21



22



23



24

25. Storage compartments are finished & painted.



26. Outside wall gets paint.



27 & 28. Weld together steel mounting frame.

29. Paint steel mounting frame.



30. Move steel mounting frame into location.

31, 32 & 33. Start assembling the observatory.

Troy said, luckily he had the help of many of his friends, who did all of the heavy lifting & that without them this would not have been possible.





34. The finished Observatory



35 & 36. Part of the floor swings to one side for easy access.

37. Troy has also built an electric lift pier for the Observatory, which allows him to reach the eyepiece, for those times when the eyepiece is in a hard to use position... Is also very handy when an object is low on the horizon. The pier carries his EQ6 mount.

38. Welding the parts of the electric lift pier together.

39. Troy gives his creation the thumbs up.

Troy, has only been a member at MPAS for 2 years. He is a very keen astrophotographer & has product many nice images. He is also a keen visual astronomer, mainly concentrating on the Moon & planets, with his ED80 refractor. Troy, also has the very popular 8 inch F4 astrograph Newtonian reflector, which is for astrophotography. He also has a 12 inch Dobsonian & is contemplating mounting it on to the EQ6. The observatory is only just big enough to swing the 12 inch. We are looking forward to seeing more of his images.



*This story was put together by
Troy Nodzio & Greg Walton*



SOCIETY INFORMATION



Dave Rolfe



Paul Albers



Peter Skilton



Jamie Pole



Trevor Hand



Stewart Gangell



Peter Lowe



Greg Walton

OFFICE BEARERS OF THE MORNINGTON PENINSULA ASTRONOMICAL SOCIETY

President: David Rolfe
Vice President: Paul Albers
Committee: Trevor Hand, Fiona Murray, Peter Lowe, Stewart Gangell, Greg Walton
Phone Contact: Peter Skilton - 0419 253 252

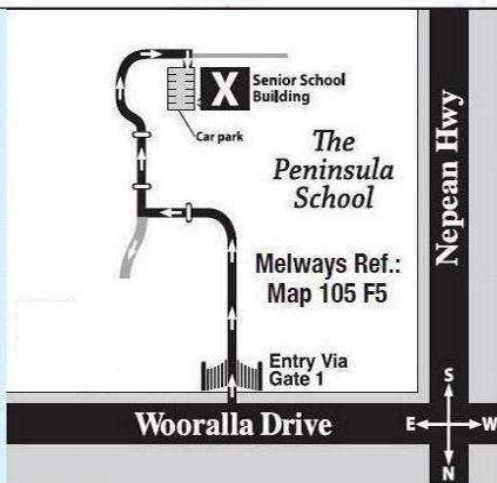
Secretary: Peter Skilton
Treasurer: Jamie Pole
Web Master: Steven Mohr
Scorpius Editor: Greg Walton
Library: Fiona Murray

SOCIETY MEETINGS

Meeting Venue: The Peninsula School, Wooralla Drive, Mt. Eliza, (Melways ref. 105/F5) in the Senior School at 8pm, on the 3rd Wednesday of each month (except December). Entry is via the main gate, off Wooralla Drive. (see map).

For additional details:
Internet: <http://www.mpas.asn.au>
email: welcome@mpas.asn.au

Phone: 0419 253 252
Mail: P.O. Box 596, Frankston 3199, Victoria, Australia.



LIBRARY

The Society also has books and videos for loan from it's library, made available on most members nights at The Briars site, contact Fiona Murray.

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 and event information as well as being able to join in discussions and ask questions with other members.

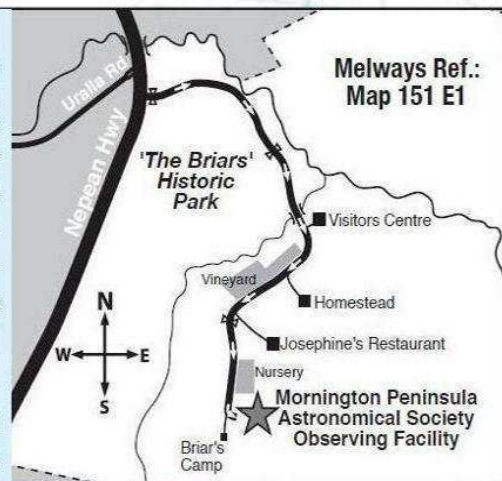
To join, go to: <http://groups.com/group/e-scorpius> and sign up to Yahoo groups - You require to sign up to Yahoo groups to join E-Scorpius. Once you have signed up at Yahoo groups, email welcome@mpas.asn.au saying that you want to join E-Scorpius and you will be added to the E-Scorpius list.

VIEWING NIGHTS - 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 either 9776 2074 or 0415 172 503 if they need help in getting to the site. Upon arrival at the site, remember to sign the attendance book in the observatory building.

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