



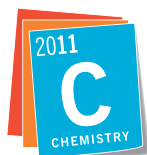
# SCORPIUS

THE JOURNAL OF THE  
MORNINGTON PENINSULA ASTRONOMICAL SOCIETY INC.

Volume XX, No. 1 (January 2011)

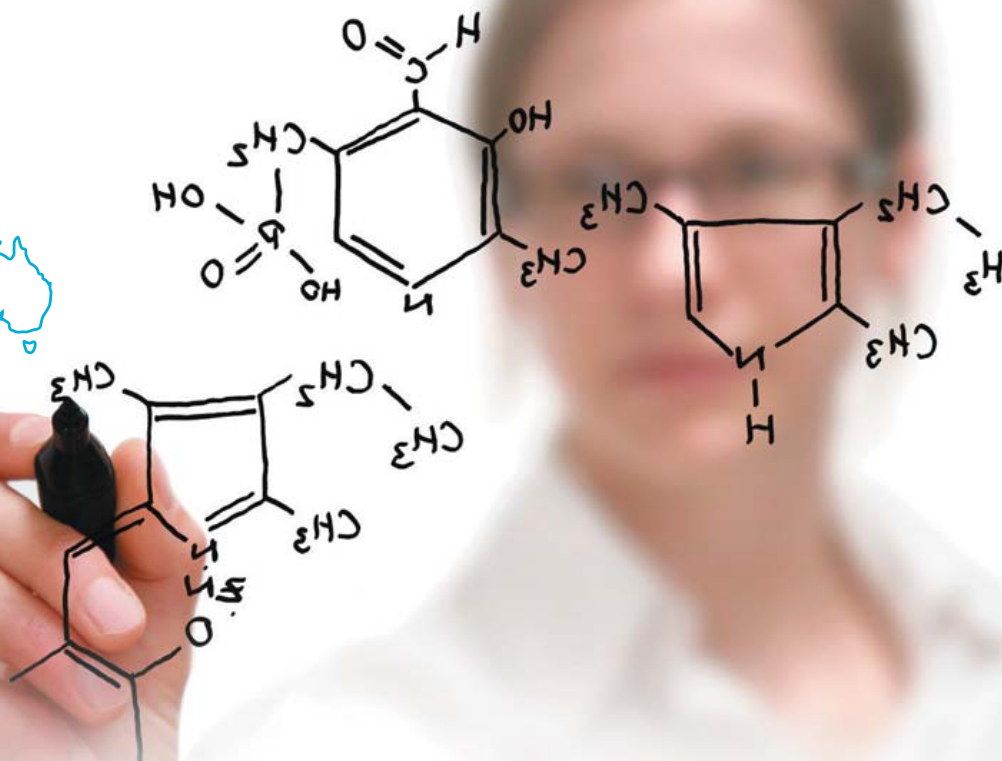
The Mornington Peninsula Astronomical Society (formerly the Astronomical Society of Frankston) was founded in 1969 with the aim of fostering the study and understanding of Astronomy by amateurs and promoting the hobby of amateur Astronomy to the general community at all levels.

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.



International Year of  
**CHEMISTRY**  
2011

Australia



The United Nations has declared 2011 as the International Year of Chemistry (IYC 2011). The International Year of Chemistry celebrates the achievements of chemistry and its contributions to the well-being of humankind.

Like the recent International Year of Astronomy, the International Year of Chemistry 2011 aims to increase the public appreciation of chemistry in meeting world needs, to encourage interest in chemistry among young people, and to generate enthusiasm for the creative future of chemistry.

The year 2011 is a deliberate choice for the celebrations as it coincides with the 100th anniversary of the Nobel Prize for Chemistry awarded to Madame Marie Curie. It is a celebration of the contributions of women to science.

*(Continued on page 6)*

<http://iyc2011.org.au/>

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# Society Calendar

## Upcoming Events in January

**Friday 21st of Jan.: Public Viewing Night at The Briars (8pm).**

*The last of January's Summer holidays Public Viewing Nights at The Briars, starting at 8pm, and held regardless of the weather. As usual, a large turnout is expected so we will need at least 6 scopes.*

**Wednesday 26th of Jan.: January's Committee Meeting at The Briars (8pm).**

**Thursday 27th of Jan.: Public Service Managers at The Stables Conference Centre, in Red Hill (8pm).**

*After-conference viewing night for a group of Public Service Managers at The Stables in Red Hill. Up to 20 adults anticipated. Address is 183 Arthurs' Seat Road Red Hill Victoria 3937 Melways 190/ J4.*

## Upcoming Events in February

**Friday 4th of Feb.: Public Viewing Night at The Briars (8pm).**

*February's regular Public Viewing Nights at The Briars, starting at 8pm, and held regardless of the weather. As usual, a large turnout is expected so we will need at least 6 scopes.*

**Saturday 5th of Feb.: Members Viewing Night at The Briars.**

*This month's members viewing night has been organised for the 5th of February. Intensity of incident light from our Lunar neighbour is slight with a near New Moon. So why not bring your scopes along for a great night's viewing (weather permitting of course). As with all member viewing nights, there will be a free BBQ Sausage-Sizzle prior to viewing*

**Friday 11th of Feb.: CSIRO Double Helix Club at Briars on Fri 11th February (8pm).**

*The CSIRO Double Helix Club viewing night at Briars on Fri 11th February. Up to 100 children & adults anticipated. They will be bringing their inflatable planetarium. As this is usually a large turnout, we will need at least 6 scopes.*

**Wednesday 16th of Feb.: February's General Meeting at the Peninsula School (8pm).**

*Session 1 - Speaker & Topic: To be Confirmed.*

*Session 2 - Open Forum and `Sky for the Month`*

**Wednesday 24th of Feb.: February's Committee Meeting at The Briars (8pm).**

While all care is taken to ensure the above dates are correct, these can change at late notice. To be up-to-date on the latest society happenings, check either E-Scorpius, the MPAS website: [www.mpas.asn.au](http://www.mpas.asn.au), or the latest "What's On" for up-to-date information.

## SCORPIUS

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### Newsletter Disclaimer

The Scorpius Newsletter is published online, once a month for its membership, by the Mornington Peninsula Astronomical Society.

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.

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## Public Night Thank-You

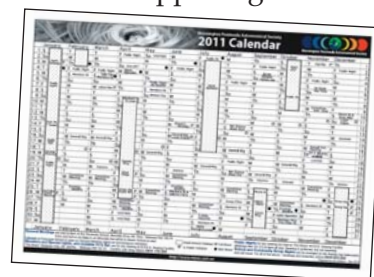
Recent public viewing nights and school viewing nights have continue to be very well received by the attendees. It is no coincidence that this is due to the efforts put in by the members that help out at these events.

To everyone that has helped out over the past few months, a very big thank-you goes to you all. Your efforts are very much appreciated, and are being very well received.

# THANK YOU

## 2011 Calendar

Need to look further ahead to see what is happening in 2011?



Then the MPAS 2011 Calendar is what you need. For the full listing of this year's society events, go to the MPAS website, and download the calendar from *Upcoming Events* page, or visit E-Scorpius and download from the online files section, under *Calendars*.



# General Meeting

## January's General Meeting

January 19, 2011

Noting that we were running about 20 minutes late, our society President Peter Lowe welcomed everyone to the first General Meeting for 2011.

With approximately 22 people in attendance that evening, Peter L. gave a quick summary of the public events held over the last month, and a brief heads-up of the events ahead of us in February (see page 2). Peter L. was also our speaker for the night, and proceeded to give a quick talk entitled 'Solar Weather Effects'.

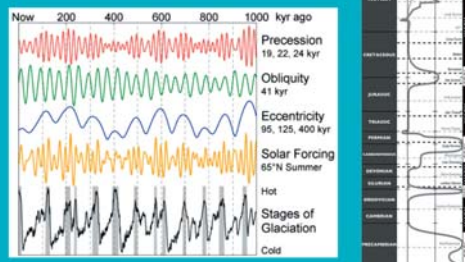
The talk was based on recent scientific papers that are coming out, that note how the Sun is affecting the weather. Over the last 10 or so years, new instruments have been employed to map and record aspects of the Sun's activity. This last Sun-Cycle was the first cycle that we have recorded the Sun with such detail - not only in the visible but also in the U.V. and X-Ray spectrum.

Peter L. went on to explain that this monitoring which is now being tabled and released, is starting to show some preconceived ideas about the Sun's effect on the earth may need a bit of a re-evaluation. After presenting a couple of the findings, Peter L. took questions which inevitably led to 'Climate Change' discussions, but we didn't dwell on that subject for too long.

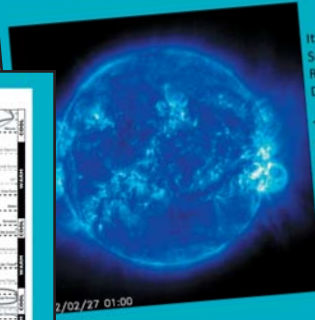
After the presentation, the raffle was drawn with a Screwdriver set (and toffies), a thermal food carrier, and 3 desk calendars up as the January prizes. We had a short break and finished off...



### Milankovitch Cycles



### Shortwave length radiations



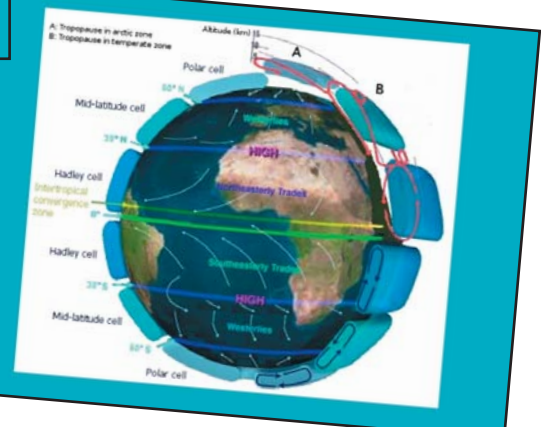
It appears that active regions on the Sun's Surface are emitting excess UV or X-ray Radiation which offsets the loss of energy Due to the cooler visible sunspot.

This excess shortwave radiation is absorbed in the upper atmosphere and increases the size and intensity of the circulation cells.

Preliminary research and more data is needed to establish a better, more predictive model



the evening with Bob's 'Sky for the Month' presentation (copies of these are on pages 10 & 11). The meeting was finished by 10pm.





## 2011 Astronomy Australia — Briars Site Update



Once again, the society is fortunate enough to secure your guide to the astronomical year ahead with the **2011 ASTRONOMY AUSTRALIA**. This practical guide to all things astronomical in the Australian skies is a wonderful reference for all levels of star-gazers, from newcomer to expert. Pricing is \$25 to the public, though society members can get it at the discounted rate of \$20.

Orders and payments can be made in person at any M.P.A.S. gathering, by cheque to P.O. Box 596, Frankston 3199, or by phone by leaving a message on 0419 253 252. These sky almanacs will be available at any society gathering.

**Hurry!** The society only orders in a specific quantity each year, and it's first come, first served.

### Snake Warning for the Briars

With Summer now here, we wish to remind all members that it is that time of the year again when we must be aware of snakes at the facility. Usually there are a few sightings reported each Summer.

If anyone does come across a snake on the site or in any part of the grounds at the Briars then the best thing to do is to walk away and alert other people of the presence of the snake.

Do not disturb the snake or attempt to kill the snake under any circumstances as they are a protected species on the Briars site.

Anyone that has been up to The Briars over the Summer would have noticed the wonderful work that has been put into our observing site by Greg Walton and his team of helpers.

In preparation for our hosting of VASTROC in April this year, and also a lasting legacy for our society, the Briars site is starting to look better than ever with extensions to the concrete viewing platforms, more storage area and a now enclosed under cover area.



Of course now of this would have not been possible without a lot of members help over the last few months, so a big thank you for everyone who helped out and to Greg for organising the works.

### VASTROC 2011 Update

For those after some VASTROC news, we can tell you that just after Australia Day, registrations will open for our hosting of this event.

Already online is the 'Call for Presentations' and a general overview flyer for the event, however by the end of January, the registrations will be available for those interested in attending the weekend event. Please check out website for more details.

#### *A Call for Volunteers. Can You Help?*

M.P.A.S. is hosting the 2011 VASTROC over April 29<sup>th</sup> to May 1<sup>st</sup> next year.

VASTROC's have been running for over twenty years and this is the third time we have hosted the event. It is a short conference style get-together that brings amateurs from across Victoria to exchange ideas and experiences. It is the ideal way to meet other amateurs with similar



interests in a fun, social environment. A chance to experience the broader amateur astronomy scene across Victoria.

To help this two-day event run smoothly we need volunteers who can assist in the many smaller activities necessary to make the event a success. If you are planning to attend the VASTROC or can spare some time please put your hand up. If you can help contact Peter Lowe or Brett Bajada



# Society News

## 2011 Society Fees

It's the beginning of the year which means society fees are now due.

Members once again have the option of paying just for this year's fees, or (like several members did this time last year), take up the option of multi-year society memberships.

We are offering these multi-year memberships for their convenience and security against possible future membership fee increase.

The memberships on offer can be seen on the table to the right. You will need to specify which membership type you are purchasing when you renew.

Please note, once purchased these memberships are not refundable, so please consider these multi-year options carefully prior to purchase.

If there are any queries you may have about the fees, please speak to one of the society committee members.

<b>1 year option:</b>	Full Membership - \$50
	Pensioner Membership - \$45
	Family Membership - \$65
	Family Pensioner Membership - \$60
	Newsletter Subscription Only - \$22

<b>2 years option:</b>	Full Membership - \$100
	Pensioner Membership - \$90
	Family Membership - \$130
	Family Pensioner Membership - \$120
	Newsletter Subscription Only - \$44

<b>3 years option:</b>	Full Membership - \$150
	Pensioner Membership - \$135
	Family Membership - \$195
	Family Pensioner Membership - \$180
	Newsletter Subscription Only - \$66

<b>5 years option:</b>	Full Membership - \$200	<i>Pay for 4 years, and be a member for 5 years!</i>
	Pensioner Membership - \$180	
	Family Membership - \$260	
	Family Pensioner Membership - \$240	
	Newsletter Subscription Only - \$88	

**20% Discount Offer**

## Bentleigh Street Festival

Back in November, the society once again participated in the Bentleigh Street Festival. A couple of telescopes were set up for display, and the weather that day allowed for some solar viewing also. A big thanks for those who helped out on the day.





## SpaceX's Dragon Spacecraft Successfully Re-Enters From Orbit \_\_\_\_\_

December 15, 2010

On December 8, SpaceX became the first commercial company in history to re-enter a spacecraft from Earth orbit.



SpaceX launched its Dragon spacecraft into orbit atop a Falcon 9 rocket at 10:43 AM EST from Launch Complex 40 at the Cape Canaveral Air Force Station in Florida. The Dragon spacecraft orbited the Earth at speeds greater than 7,600 meters per second (17,000 miles per hour), reentered the Earth's atmosphere, and landed just after 2:00 PM EST less than one mile from the center of the targeted landing zone in the Pacific Ocean.

This marks the first time a commercial company has successfully recovered a spacecraft reentering from Earth orbit. It is a feat previously performed by only six nations or government agencies: the United States, Russia, China, Japan, India, and the European Space Agency.

As the very first flight under the Commercial Orbital Transportation Services (COTS) program, COTS Demo 1 followed a nominal flight profile that included a roughly 9.5-minute ascent, two Earth-orbits, reentry and splashdown. Falcon 9 delivered Dragon to orbit with an inclination of 34.53 degrees—a near bull's-eye insertion.

Credit: © 2011 Space Exploration Technologies Corp.  
<http://www.spacex.com/updates.php>

## PlayStation 3 consoles become military supercomputer \_\_\_\_\_

December 28, 2010

US Air Force researchers have created the Defence Department's largest interactive supercomputer - the 35th fastest in the world - from 1760 Sony PlayStation 3s.

The amalgamation of consoles, nicknamed the "Condor Cluster," will be used to "process high-resolution satellite images and boost surveillance capabilities" according to The Air Force Times.

It will allow scientists to monitor a 15.5-mile area in real time.

Mark Barnell, director of the Air Force Research Laboratory at Wright-Patterson Air Force Base, Ohio - where the computer was unveiled earlier this month - said that the computer is also capable of reading 20 pages per second with up to 30 percent of the characters removed and recovering all the words without error.



Image Credit: © 2011 Sony

The "Condor Cluster" is energy efficient and at \$US 2 million, has a price tag well below that of traditional computing equipment.

"We're striving hard to make affordable and constrained systems, where they can really use them and make a difference," Mr Barnell said, adding that it is thought to be the seventh "greenest" computer in the world.

Source: NewsCore.

<http://www.heraldsun.com.au>

## 2011 International Year of Chemistry (Cont. pg.1) \_\_\_\_\_

The year is also the 100th anniversary of the founding of the International Association of Chemical Societies and celebrates the benefits of international scientific collaboration.

In Australia, a program of events, tours, exhibitions and activities will be spearhead by the Royal Australian Chemical Institute (RACI), recognising and celebrating chemistry's role in sustainability and on-going improvements to our way of life, as well as the vital role chemically-related sciences play in modern Australia.

The official launch of the IYC 2011 in Australia will be held in Canberra on February 8 and 9, 2011.

In our field of interest, astrochemistry is the study of the abundance and reactions of chemical elements and molecules in the universe, and their interaction with radiation, enhances our understanding of the Universe.

The discipline is an overlap of astronomy and chemistry. The word "astrochemistry" may be applied to both the Solar System and the interstellar medium. The study of the abundance of elements and isotope ratios in Solar System objects, such as meteorites, is also called cosmochemistry, while the study of interstellar atoms and molecules and their interaction with radiation is sometimes also called molecular astrophysics.

The formation, atomic and chemical composition, evolution and fate of molecular gas clouds is of special interest, because it is from these clouds that solar systems form.

While the IYC website seems to focus on more terrestrial chemistry matters, there may be a couple of astronomy related event themes later in the year. Keep checking the IYC website for updates.

<http://www.iyc2011.org.au>

# Society Reports

## Lake Tyrrel Star Party

I was getting excited driving to Sea Lake (NW Vic) on Friday to attend the Inaugural Lake Tyrrel Star Party and looked forward to the first proper light under true dark skies with my family and 22" f/3.6 Dob named Nyx.

After arriving, unpacking and an informal meeting with the organising committee, I set up in a relatively dark spot on the sports oval in town. We shared the views of brighter objects at the beginning of the night - 47 Tuc, Tarantula, M22 and friends then Jupiter and other favourites. The seeing was good and everyone was impressed. The electrician who came to switch the outside lights off appeared to be most excited with the views. After more than two hours of viewing people left and it was just me, Nyx and the stars.

The first object I dialed in Argo Navis was the Silver Coin galaxy (NGC 253 in Sculptor). When I saw it in the 21mm Ethos (95x magnification with 1.1° field) my jaw almost dropped on the grass - *so much detail*. The spiral structure was recognisable and dark dust clouds everywhere. I spent good 15 minutes observing it before moving to a next target.

I changed the eyepiece to 13mm Ethos (152x and 0.7° field) to view NGC 134 in the same constellation. The dust lane going across the edge-on galaxy was evident and I could see some mottling. A small galaxy in the same field was a bonus.

Comet 10P/Tempel was nice with bright core and extended green coma.

Just after midnight M31 in Andromeda got to its highest elevation of 13° and I quickly pointed the telescope at it. Even though it was so low on the horizon and I had to almost lie on the ground to look through the 21mm eyepiece, it was worth it. I was rewarded with the

breath-taking view of the bright soft core, extended halo separated by an obvious dark lane. This kind of excitement might sound odd for Northern Hemisphere observers but we rarely get to see the Great Andromeda nebula down here.

Then I slewed to NGC 1365 in Fornax and it was very much like in the images with bright core and extended arms. I decided to spend the rest of the time that night in Fornax and let Argo Navis give me a tour of galaxies there.

NGC 1097 (Arp 77) looked like a "script I" with two arms extending out. I could not quite make out the dwarf companion but I guess I am asking too much. NGC 986 was a beautiful sight - a distinct letter "S" with two arms extending out.

When I got to NGC 1380 and two others in the 13mm Ethos field, I put the 21mm eyepiece back and could count nine galaxies in the 1.1° field and two more were just outside. All of them were obvious with direct vision.

The other galaxies in Fornax kept me busy for more than an hour before I decided to pack up around 1.30am to be fresh for Saturday lectures.

The lectures were fantastic, Dr Victor Gostin and Paul Curnow from Adelaide gave great talks on geology

of Mars and Aboriginal Skies. Olga Gostin gave a very good presentation about Lake Mungo and the important archaeological remains found there. The closing lecture by John Morieson about Boorong Night Sky had a wealth of fascinating information about the constellations and stars of Boorong clan, once inhabiting the area.

On Saturday night there was public viewing at the Lake Tyrrel observation platform. I set up the scope and pointed it at 47 Tuc, which is a delightful sight in 21mm Ethos with Type2 Paracorr. I could count at least 40 people lined up to see it. Then Paul Curnow gave a great talk about the objects in the sky, followed up by public viewing of Jupiter and its moons, Swan and Tarantula nebulae and a few galaxies.

I used a lot of superlatives but it describes what I felt quite accurately. The first time with my large Dobsonian under true dark skies and great atmosphere created by citizens of Sea Lake and guest speakers ought to bring that out.

For more information about the "Lake Tyrrel Star Party" visit <http://sealake.vic.au/starparty>

*Alex Cherney*  
October '10





# Rise & Shine Times

## JANUARY

Date	Civil Twilight Begins	☀ Sun			Civil Twilight Ends	☾ Moon	♿ Mercury		♀ Venus		♂ Mars		
		Sunrise	Sunset				Phase	Rise	Sets	Rise	Sets	Rise	Sets
Jan 1 (Sat)	05:28	06:00	20:46	21:18	☾	02:52	17:59	04:46	19:05	03:14	17:00	06:37	21:21
Jan 2 (Sun)	05:29	06:00	20:47	21:18	☾	03:41	18:59	04:42	19:03	03:14	17:01	06:36	21:20
Jan 3 (Mon)	05:30	06:01	20:47	21:18	☾	04:36	19:52	04:39	19:02	03:13	17:02	06:36	21:19
Jan 4 (Tue)	05:31	06:02	20:47	21:18	☾	05:36	20:38	04:37	19:01	03:12	17:02	06:36	21:17
Jan 5 (Wed)	05:32	06:03	20:47	21:18	New	06:38	21:17	04:35	19:01	03:11	17:03	06:36	21:16
Jan 6 (Thu)	05:33	06:04	20:47	21:18	☾	07:40	21:50	04:33	19:01	03:11	17:04	06:36	21:15
Jan 7 (Fri)	05:34	06:05	20:47	21:18	☾	08:41	22:18	04:32	19:01	03:10	17:05	06:36	21:14
Jan 8 (Sat)	05:35	06:06	20:47	21:18	☾	09:40	22:45	04:31	19:02	03:09	17:06	06:36	21:13
Jan 9 (Sun)	05:36	06:07	20:47	21:17	☾	10:38	23:09	04:30	19:03	03:09	17:07	06:35	21:12
Jan 10 (Mon)	05:37	06:08	20:46	21:17	☾	11:34	23:34	04:30	19:04	03:08	17:08	06:35	21:11
Jan 11 (Tue)	05:38	06:09	20:46	21:17	☾	12:31	23:59	04:30	19:05	03:08	17:09	06:35	21:09
Jan 12 (Wed)	05:39	06:10	20:46	21:17	F.Q.	13:29	D.N.S.	04:30	19:07	03:07	17:10	06:35	21:08
Jan 13 (Thu)	05:40	06:11	20:46	21:16	☾	14:27	00:26	04:30	19:08	03:07	17:11	06:35	21:07
Jan 14 (Fri)	05:41	06:12	20:45	21:16	☾	15:28	00:57	04:31	19:10	03:06	17:12	06:35	21:06
Jan 15 (Sat)	05:42	06:13	20:45	21:16	☾	16:29	01:32	04:31	19:12	03:06	17:13	06:35	21:04
Jan 16 (Sun)	05:43	06:14	20:45	21:15	☾	17:30	02:15	04:32	19:14	03:06	17:15	06:35	21:03
Jan 17 (Mon)	05:44	06:15	20:44	21:15	☾	18:28	03:05	04:33	19:16	03:06	17:16	06:35	21:02
Jan 18 (Tue)	05:45	06:16	20:44	21:14	☾	19:21	04:04	04:35	19:18	03:05	17:17	06:35	21:01
Jan 19 (Wed)	05:47	06:17	20:43	21:14	Full	20:08	05:11	04:36	19:20	03:05	17:18	06:35	20:59
Jan 20 (Thu)	05:48	06:18	20:43	21:13	☾	20:49	06:23	04:38	19:22	03:05	17:19	06:35	20:58
Jan 21 (Fri)	05:49	06:19	20:42	21:12	☾	21:25	07:36	04:39	19:24	03:05	17:20	06:35	20:56
Jan 22 (Sat)	05:50	06:20	20:42	21:12	☾	21:58	08:50	04:41	19:26	03:05	17:22	06:35	20:55
Jan 23 (Sun)	05:51	06:21	20:41	21:11	☾	22:29	10:03	04:43	19:29	03:05	17:23	06:35	20:54
Jan 24 (Mon)	05:53	06:23	20:41	21:10	☾	23:01	11:15	04:45	19:31	03:05	17:24	06:35	20:52
Jan 25 (Tue)	05:54	06:24	20:40	21:09	☾	23:34	12:26	04:48	19:33	03:05	17:25	06:35	20:51
Jan 26 (Wed)	05:55	06:25	20:39	21:09	L.Q.	D.N.R.	13:36	04:50	19:35	03:06	17:27	06:35	20:49
Jan 27 (Thu)	05:56	06:26	20:38	21:08	☾	00:10	14:45	04:53	19:37	03:06	17:28	06:35	20:48
Jan 28 (Fri)	05:58	06:27	20:38	21:07	☾	00:51	15:52	04:56	19:39	03:06	17:29	06:35	20:46
Jan 29 (Sat)	05:59	06:28	20:37	21:06	☾	01:38	16:53	04:58	19:41	03:07	17:30	06:35	20:45
Jan 30 (Sun)	06:00	06:29	20:36	21:05	☾	02:30	17:48	05:01	19:43	03:07	17:31	06:35	20:43
Jan 31 (Mon)	06:01	06:31	20:35	21:04	☾	03:28	18:35	05:05	19:45	03:07	17:33	06:35	20:42

Date	♃ Jupiter		♄ Saturn		♅ Uranus		♆ Neptune	
	Rise	Sets	Rise	Sets	Rise	Sets	Rise	Sets
Jan 1 (Sat)	12:17	00:41	01:29	14:00	12:20	00:39	09:50	23:18
Jan 2 (Sun)	12:14	00:37	01:25	13:56	12:16	00:35	09:46	23:14
Jan 3 (Mon)	12:10	00:33	01:21	13:52	12:12	00:31	09:43	23:11
Jan 4 (Tue)	12:07	00:30	01:17	13:49	12:08	00:28	09:39	23:07
Jan 5 (Wed)	12:04	00:26	01:13	13:45	12:04	00:24	09:35	23:03
Jan 6 (Thu)	12:01	00:22	01:10	13:41	12:01	00:20	09:31	22:59
Jan 7 (Fri)	11:58	00:19	01:06	13:37	11:57	00:16	09:27	22:55
Jan 8 (Sat)	11:54	00:15	01:02	13:34	11:53	00:12	09:24	22:51
Jan 9 (Sun)	11:51	00:12	00:58	13:30	11:49	00:08	09:20	22:48
Jan 10 (Mon)	11:48	00:08	00:54	13:26	11:45	00:04	09:16	22:44
Jan 11 (Tue)	11:45	00:04	00:51	13:22	11:42	23:58	09:12	22:40
Jan 12 (Wed)	11:42	00:01	00:47	13:18	11:38	23:53	09:09	22:36
Jan 13 (Thu)	11:39	23:54	00:43	13:15	11:34	23:49	09:05	22:32
Jan 14 (Fri)	11:35	23:50	00:39	13:11	11:30	23:45	09:01	22:28
Jan 15 (Sat)	11:32	23:47	00:35	13:07	11:26	23:41	08:57	22:24
Jan 16 (Sun)	11:29	23:43	00:31	13:03	11:23	23:37	08:54	22:21
Jan 17 (Mon)	11:26	23:40	00:27	12:59	11:19	23:33	08:50	22:17
Jan 18 (Tue)	11:23	23:36	00:23	12:55	11:15	23:30	08:46	22:13
Jan 19 (Wed)	11:20	23:33	00:20	12:52	11:11	23:26	08:42	22:09
Jan 20 (Thu)	11:17	23:29	00:16	12:48	11:08	23:22	08:38	22:05
Jan 21 (Fri)	11:14	23:26	00:12	12:44	11:04	23:18	08:35	22:01
Jan 22 (Sat)	11:11	23:22	00:08	12:40	11:00	23:14	08:31	21:58
Jan 23 (Sun)	11:08	23:18	00:04	12:36	10:56	23:10	08:27	21:54
Jan 24 (Mon)	11:05	23:15	23:58	12:32	10:53	23:07	08:23	21:50
Jan 25 (Tue)	11:02	23:11	23:52	12:28	10:49	23:03	08:20	21:46
Jan 26 (Wed)	10:59	23:08	23:48	12:24	10:45	22:59	08:16	21:42
Jan 27 (Thu)	10:56	23:05	23:45	12:20	10:41	22:55	08:12	21:38
Jan 28 (Fri)	10:53	23:01	23:41	12:16	10:38	22:51	08:08	21:35
Jan 29 (Sat)	10:50	22:58	23:37	12:12	10:34	22:47	08:05	21:31
Jan 30 (Sun)	10:47	22:54	23:33	12:08	10:30	22:44	08:01	21:27
Jan 31 (Mon)	10:44	22:51	23:29	12:04	10:27	22:40	07:57	21:23

**Notes on using these tables**

The following times are calculated for Local Time at The Briars Observing Facility:  
 Latitude 38° 16' South,  
 Longitude 145° 02' East.

These times can be used throughout the Mornington Peninsula and surrounding areas, to within +/- 1 minute.

L.Q. - Last Quarter Moon  
 New - New Moon  
 F.Q. - First Quarter Moon  
 Full. - Full Moon  
 D.N.R. - Moon Does Not Rise  
 D.N.S. - Moon Does Not Set

Civil Twilight is calculated when the Sun is 6° below the horizon, and is practically marked as the beginning or end of the day's useable light. The first of the evening stars are visible at this time.



# Rise & Shine Times

## FEBRUARY

Date	Civil Twilight Begins	☉ Sun			Phase	☾ Moon			♿ Mercury		♀ Venus		♂ Mars	
		Sunrise	Sunset	Civil Twilight Ends		Rise	Sets	Rise	Sets	Rise	Sets	Rise	Sets	
Feb 1 (Tue)	06:03	06:32	20:34	21:03	☾	04:28	19:15	05:08	19:47	03:08	17:34	06:35	20:40	
Feb 2 (Wed)	06:04	06:33	20:33	21:02	☾	05:29	19:50	05:11	19:49	03:08	17:35	06:35	20:39	
Feb 3 (Thu)	06:05	06:34	20:33	21:01	New ☾	06:30	20:20	05:15	19:50	03:09	17:36	06:35	20:37	
Feb 4 (Fri)	06:06	06:35	20:32	21:00	☾	07:30	20:47	05:18	19:52	03:10	17:37	06:35	20:35	
Feb 5 (Sat)	06:08	06:36	20:31	20:59	☾	08:28	21:13	05:22	19:54	03:10	17:38	06:35	20:34	
Feb 6 (Sun)	06:09	06:38	20:30	20:58	☾	09:25	21:37	05:26	19:55	03:11	17:39	06:35	20:32	
Feb 7 (Mon)	06:10	06:39	20:29	20:57	☾	10:21	22:02	05:30	19:57	03:12	17:41	06:36	20:30	
Feb 8 (Tue)	06:11	06:40	20:27	20:56	☾	11:18	22:28	05:34	19:58	03:13	17:42	06:36	20:29	
Feb 9 (Wed)	06:13	06:41	20:26	20:55	☾	12:16	22:57	05:38	19:59	03:14	17:43	06:36	20:27	
Feb 10 (Thu)	06:14	06:42	20:25	20:54	F.Q. ☾	13:15	23:30	05:42	20:01	03:14	17:44	06:36	20:25	
Feb 11 (Fri)	06:15	06:43	20:24	20:52	☾	14:15	D.N.S.	05:46	20:02	03:15	17:45	06:36	20:24	
Feb 12 (Sat)	06:16	06:44	20:23	20:51	☾	15:14	00:08	05:51	20:03	03:16	17:46	6:36	20:22	
Feb 13 (Sun)	06:18	06:46	20:22	20:50	☾	16:12	00:54	05:55	20:04	03:18	17:47	06:36	20:20	
Feb 14 (Mon)	06:19	06:47	20:21	20:49	☾	17:06	01:47	06:00	20:05	03:19	17:47	06:36	20:18	
Feb 15 (Tue)	06:20	06:48	20:20	20:47	☾	17:55	02:48	06:04	20:06	03:20	17:48	06:36	20:17	
Feb 16 (Wed)	06:21	06:49	20:18	20:46	☾	18:39	03:56	06:09	20:07	03:21	17:49	06:36	20:15	
Feb 17 (Thu)	06:22	06:50	20:17	20:45	☾	19:18	05:09	06:14	20:08	03:22	17:50	06:36	20:13	
Feb 18 (Fri)	06:23	06:51	20:16	20:43	Full ☾	19:53	06:23	06:19	20:09	03:23	17:51	06:36	20:11	
Feb 19 (Sat)	06:25	06:52	20:15	20:42	☾	20:27	07:38	06:24	20:10	03:25	17:51	06:36	20:09	
Feb 20 (Sun)	06:26	06:53	20:13	20:41	☾	20:59	08:53	06:29	20:11	03:26	17:52	06:36	20:08	
Feb 21 (Mon)	06:27	06:55	20:12	20:39	☾	21:33	10:07	06:34	20:11	03:27	17:53	06:36	20:06	
Feb 22 (Tue)	06:28	06:56	20:11	20:38	☾	22:10	11:21	06:39	20:12	03:29	17:53	06:36	20:04	
Feb 23 (Wed)	06:29	06:57	20:09	20:37	☾	22:50	12:33	06:44	20:13	03:30	17:54	06:36	20:02	
Feb 24 (Thu)	06:30	06:58	20:08	20:35	☾	23:36	13:42	06:50	20:13	03:32	17:55	06:36	20:00	
Feb 25 (Fri)	06:32	06:59	20:07	20:34	L.Q. ☾	D.N.R.	14:46	06:55	20:14	03:33	17:55	06:36	19:58	
Feb 26 (Sat)	06:33	07:00	20:05	20:32	☾	00:27	15:44	07:00	20:14	03:35	17:56	06:36	19:56	
Feb 27 (Sun)	06:34	07:01	20:04	20:31	☾	01:23	16:33	07:06	20:15	03:37	17:56	06:36	19:54	
Feb 28 (Mon)	06:35	07:02	20:02	20:29	☾	02:22	17:16	07:12	20:15	03:38	17:56	06:36	19:53	

Date	♃ Jupiter		♄ Saturn		♅ Uranus		♆ Neptune	
	Rise	Sets	Rise	Sets	Rise	Sets	Rise	Sets
Feb 1 (Tue)	10:41	22:47	23:25	12:00	10:23	22:36	07:53	21:19
Feb 2 (Wed)	10:38	22:44	23:21	11:56	10:19	22:32	07:50	21:15
Feb 3 (Thu)	10:35	22:40	23:17	11:52	10:15	22:28	07:46	21:12
Feb 4 (Fri)	10:32	22:37	23:13	11:48	10:12	22:24	07:42	21:08
Feb 5 (Sat)	10:29	22:33	23:09	11:44	10:08	22:21	07:38	21:04
Feb 6 (Sun)	10:26	22:30	23:05	11:40	10:04	22:17	07:35	21:00
Feb 7 (Mon)	10:23	22:26	23:01	11:36	10:01	22:13	07:31	20:56
Feb 8 (Tue)	10:20	22:23	22:57	11:32	09:57	22:09	07:27	20:52
Feb 9 (Wed)	10:17	22:19	22:53	11:28	09:53	22:05	07:23	20:49
Feb 10 (Thu)	10:14	22:16	22:49	11:24	09:49	22:01	07:20	20:45
Feb 11 (Fri)	10:11	22:13	22:45	11:20	09:46	21:58	07:16	20:41
Feb 12 (Sat)	10:08	22:09	22:41	11:16	09:42	21:54	07:12	20:37
Feb 13 (Sun)	10:06	22:06	22:37	11:12	09:38	21:50	07:08	20:33
Feb 14 (Mon)	10:03	22:02	22:33	11:08	09:35	21:46	07:05	20:29
Feb 15 (Tue)	10:00	21:59	22:29	11:04	09:31	21:42	07:01	20:26
Feb 16 (Wed)	09:57	21:55	22:25	11:00	09:27	21:39	06:57	20:22
Feb 17 (Thu)	09:54	21:52	22:21	10:56	09:24	21:35	06:54	20:18
Feb 18 (Fri)	09:51	21:49	22:17	10:51	09:20	21:31	06:50	20:14
Feb 19 (Sat)	09:48	21:45	22:13	10:47	09:16	21:27	06:46	20:10
Feb 20 (Sun)	09:46	21:42	22:09	10:43	09:13	21:23	06:42	20:06
Feb 21 (Mon)	09:43	21:38	22:05	10:39	09:09	21:19	06:39	20:03
Feb 22 (Tue)	09:40	21:35	22:01	10:35	09:05	21:16	06:35	19:59
Feb 23 (Wed)	09:37	21:32	21:57	10:31	09:02	21:12	06:31	19:55
Feb 24 (Thu)	09:34	21:28	21:53	10:26	08:58	21:08	06:27	19:51
Feb 25 (Fri)	09:31	21:25	21:49	10:22	08:54	21:04	06:24	19:47
Feb 26 (Sat)	09:29	21:21	21:45	10:18	08:51	21:00	06:20	19:43
Feb 27 (Sun)	09:26	21:18	21:41	10:14	08:47	20:57	06:16	19:40
Feb 28 (Mon)	09:23	21:15	21:37	10:10	08:43	20:53	06:12	19:36

**Notes on using these tables**

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 Longitude 145° 02' East.

These times can be used throughout the Mornington Peninsula and surrounding areas, to within +/- 1 minute.

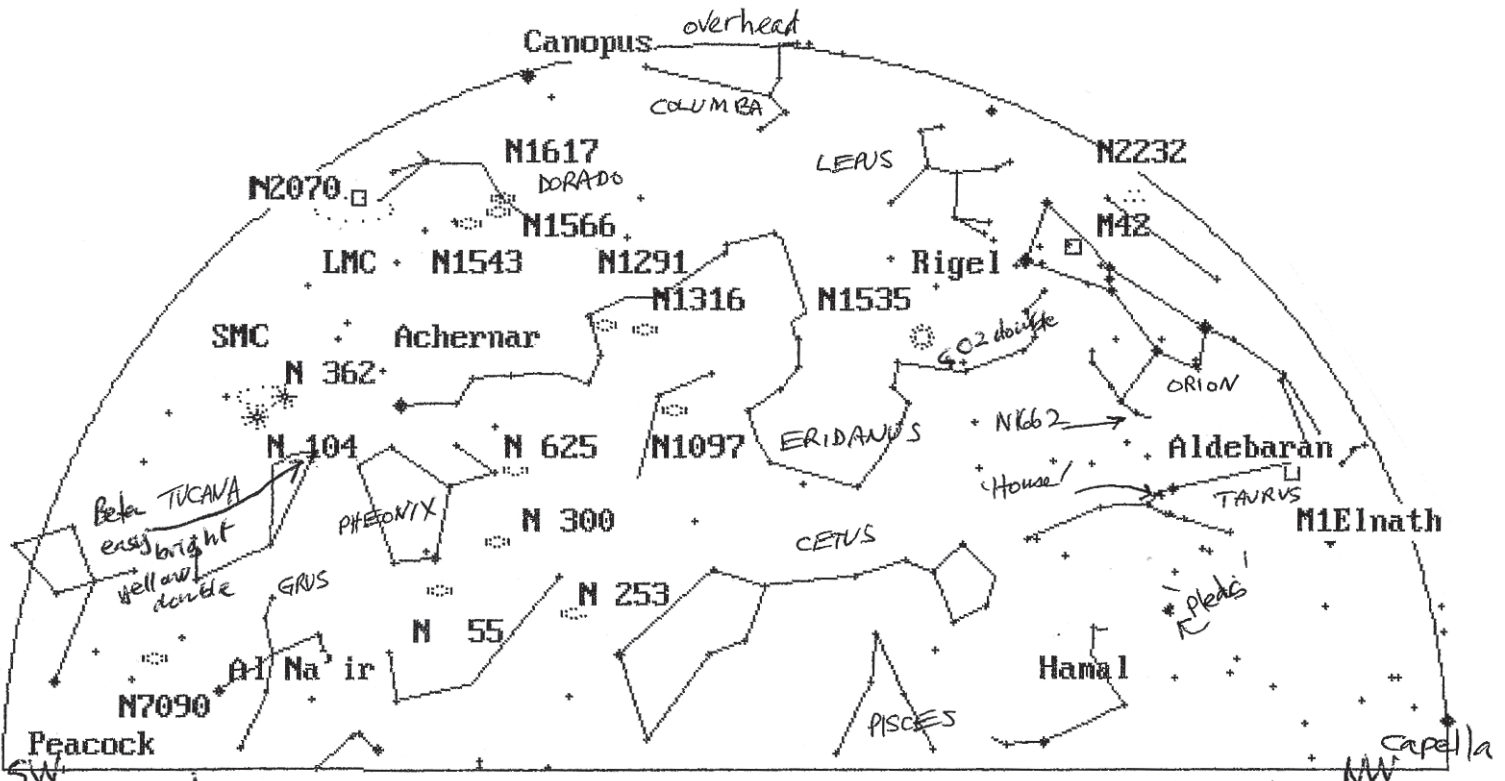
L.Q. - Last Quarter Moon  
 New - New Moon  
 F.Q. - First Quarter Moon  
 Full. - Full Moon  
 D.N.R. - Moon Does Not Rise  
 D.N.S. - Moon Does Not Set

Civil Twilight is calculated when the Sun is 6° below the horizon, and is practically marked as the beginning or end of the day's useable light. The first of the evening stars are visible at this time.

# Bob's Sky for the Month

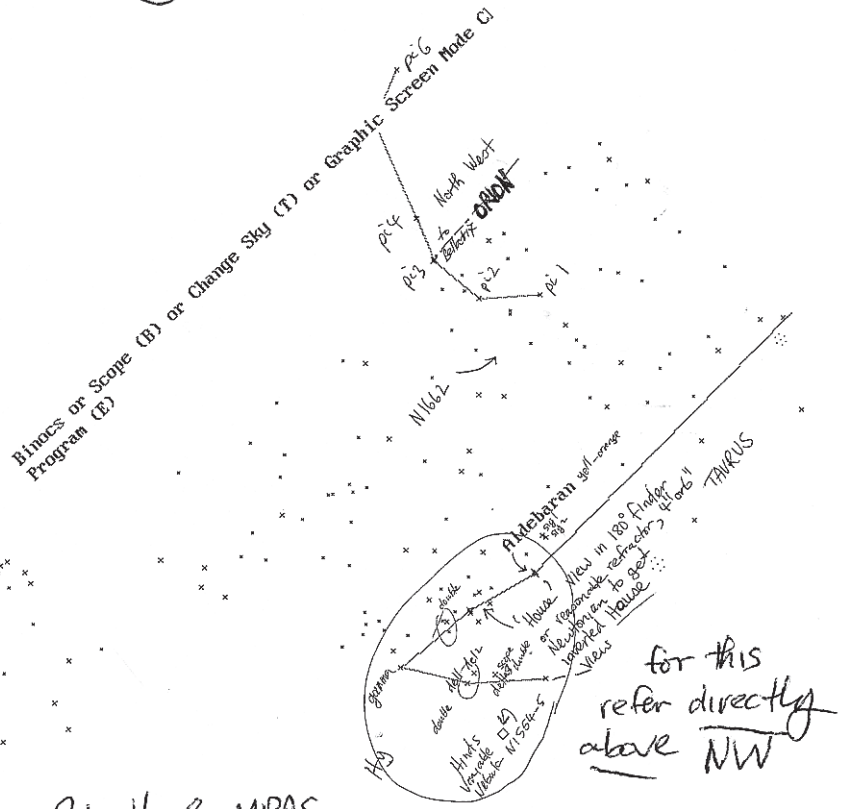
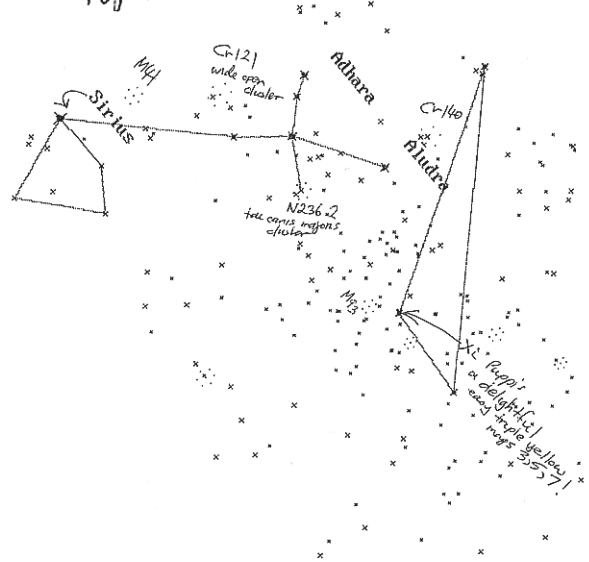
19th January to 15th February 2011, for the Mornington Peninsula

Latitude 38° 16' South,  
Longitude 145° 02' East.



SW No comets!  
11pm 2nd February West Dark Sky 2011 Summer Times, 12 midnight  
19th January 2011 and 10pm 16th February 2011 no planets for 11pm 2/2/2011

for this below  
refer other side  
east chart near  
top



for this  
refer directly  
above NW

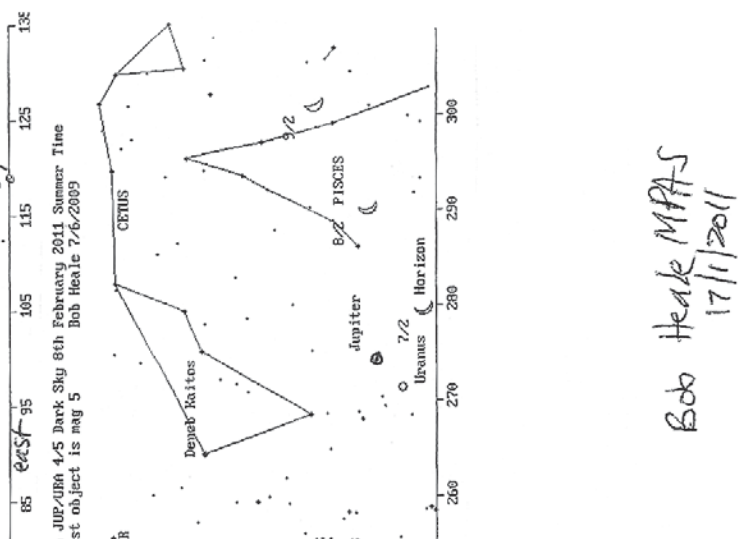
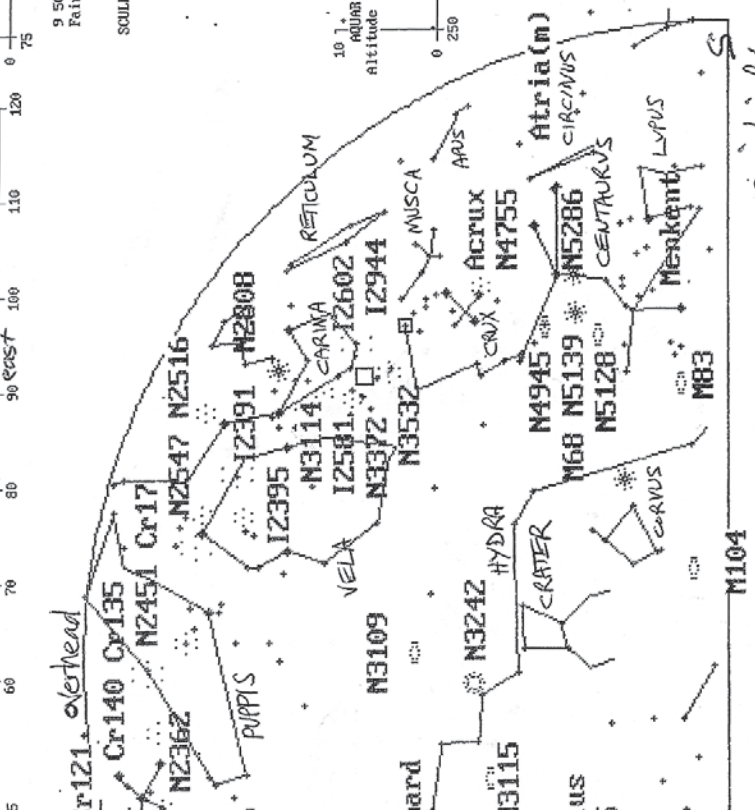
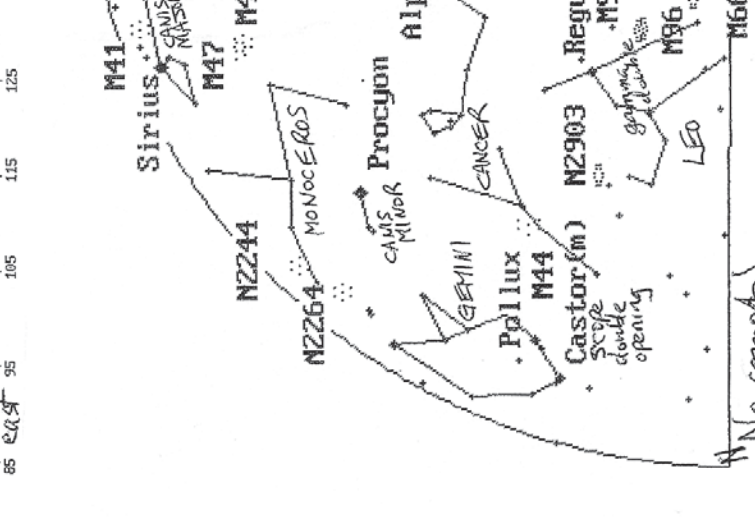
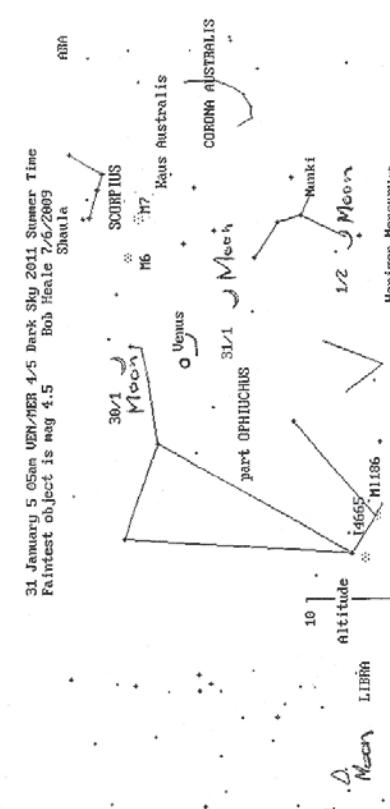
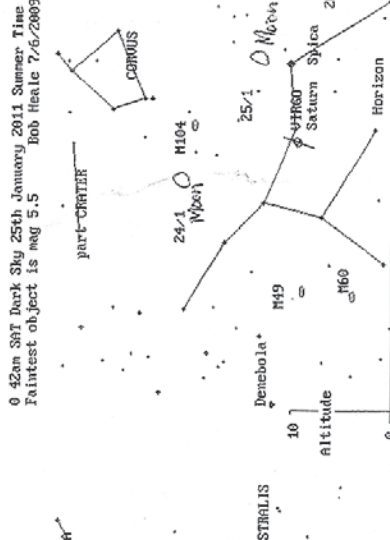
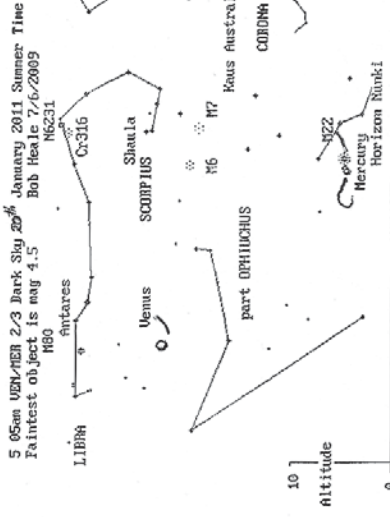
Bob Heale MPAS  
17/1/2011



# Bob's Sky for the Month

Latitude 38° 16' South,  
Longitude 145° 02' East.

## 19th January to 15th February 2011, for the Mornington Peninsula



Bob Heale MPAS  
17/1/2011

No comets!  
 11 pm 2nd February East Dark Sky 2011 Summer Times 12 mid night  
 19th January 2011 and 10 pm 16th February 2011.  
 no visible planets for 11pm 2/2/2011  
 maybe mid Feb Saturn at 1500 near  
 midnight



# Society Pictures



Above: Another pic from Alex's trip to the Lake Tyrrel Star Party (see story on page 7).



7th Jan Public Night turnout



Photoshop Workshop



11th Dec Xmas Party Members Night

All 3 Insert Pictures by John Cleverdon.



If you have any pictures that you have taken, which may be of interest to other members in the society, then don't keep them to yourself. Send an email to: [scorpius@mpas.asn.au](mailto:scorpius@mpas.asn.au) for displaying in Society Pictures



# General Society Information

## Office bearers of the Mornington Peninsula Astronomical Society

**President:** Peter Lowe  
**Vice President:** Brett Bajada  
**Committee:** Ian Sullivan, Trevor Hand, David Rolfe,  
Bob Heale, Fiona Murray, Greg Walton.  
**Phone Contact:** Peter Skilton - 0419 253 252

**Secretary:** Peter Skilton  
**Treasurer:** Marty Rudd  
**Public Officer:** Rhonda Sawosz  
**Web Master:** Steven Mohr  
**Scorpius Editor:** Brett Bajada

## General Meetings

Meeting Venue: *The Peninsula School*, Wooralla Drive, Mt. Eliza, (Melways map 105/F5) in the Senior School at 8pm, on the 3rd Wednesday of each month, except December. Entry is via the main gates or Gate 3, off Wooralla Drive. Exit is via Gate 3 Only after 9:30pm (see map).

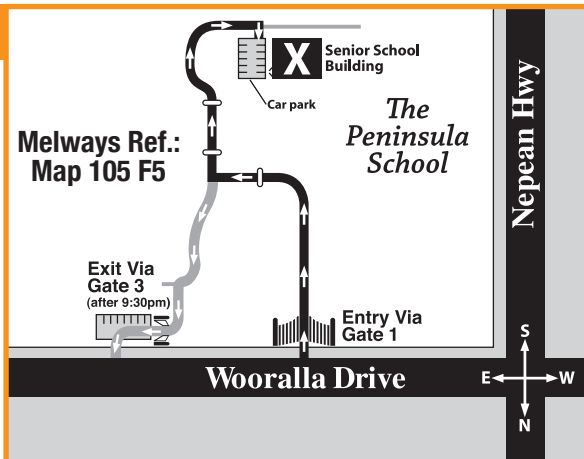
For additional details:

Phone: 0419 253 252

Mail: P.O. Box 596, Frankston 3199, Victoria, Australia.

Internet: <http://www.mpas.asn.au>

email: [welcome@mpas.asn.au](mailto:welcome@mpas.asn.au)



## Loan Equipment

The Society has a variety of telescopes including an 8-inch reflector, 80mm refractor and binoculars, all available for loan.

Contact a committee member to arrange the loan of equipment. The Society also has books and videos for loan from it's library, made available during General Meetings.

## Contributions to Scorpius

If you would like to submit an article or written contribution to Scorpius, then please send your

submission to M.P.A.S., P.O. Box 596, Frankston 3199, or you can now email to [scorpius@mpas.asn.au](mailto:scorpius@mpas.asn.au).

Any astronomical events that you have witnessed or tales you would like to tell, things you have for sale (eg: telescopes, eyepieces, etc.) then please send them in. All contributions and any feedback you wish to make about the newsletter are welcome.

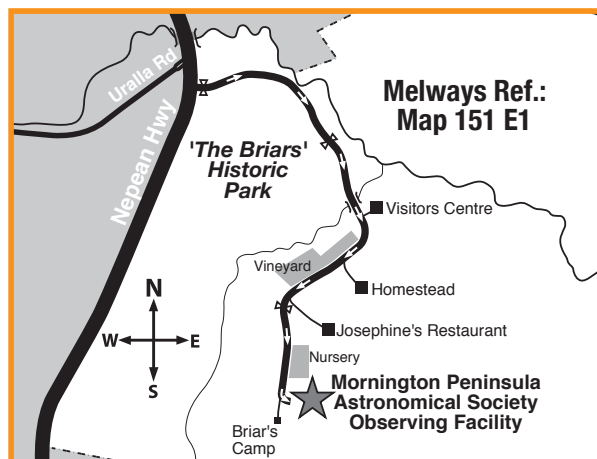
## E-Scorpius Newsgroup

M.P.A.S. has an 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.yahoo.com> 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 [skywatch@iprimus.com.au](mailto:skywatch@iprimus.com.au) saying that you want to join E-Scorpius and you will be added to the E-Scorpius list. Come on, join up. The more people in the group the better.



## 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 9773 0098 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 to verify that the mobile is turned on.

For additional details: <http://www.mpas.asn.au>