

SCORPIUS

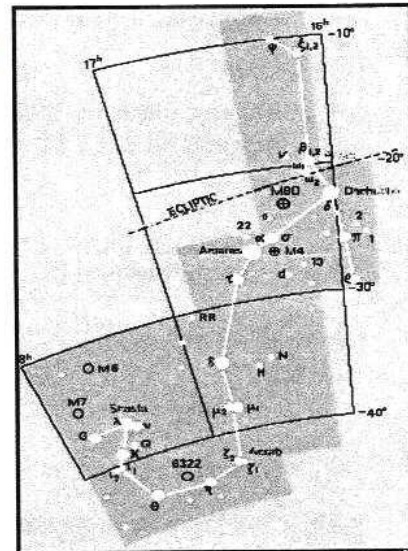
The Journal of the
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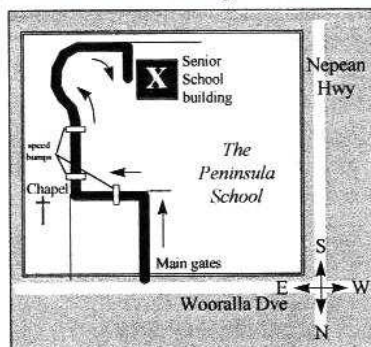
Volume XIII, No. 4 (July 2004)

The Morrington Peninsula Astronomical Society (formerly the Astronomical Society of Frankston) was founded in 1969 with the aim of fostering the study of Astronomy by amateurs and promoting the hobby of amateur Astronomy to the general public. The Society holds a General Meeting each month for the exchange of ideas and information. Regular observing nights, both private and public, are arranged to observe currently available celestial objects. For decades the Society has provided *Astronomy on the Move* educational presentations and observing nights for schools and community groups exclusively in the Peninsula and surrounding regions to Moorabbin, Dandenong & Tooradin.

Meeting Venue: 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.
Phone: 0419 253 252 **Mail:** P.O. Box 596, Frankston 3199, Victoria, Australia
Internet: <http://www.mpas.websyte.com.au>
E-mail: skywatch@iprimus.com.au



Visitors are always welcome!



Annual Membership

Full Member	\$50
Pensioner	\$45
Student	\$35
Family	\$65
Family Pensioners	\$60
Newsletter Only	\$22
Organisation	\$70

Due 1st Jan Each Year

President	
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Committee of Management:
 Peter Skilton, Sally Zetter, David Girling,
 Don Leggett.

The public officer is Rhonda Sawosz.

All calls after hours and pre- 8:30pm please.

Future Events

General Meetings:

WED 21 July 2004 at the Peninsula School.

Session 1: Speaker: Dr George Elliston - 'Vulcanism in the Solar System'

Session 2: Video: The first 25 years of NASA.

Session 3: Open Forum and Sky for the Month.

The Library will be open at General Meetings from 7:15pm to 7:55pm and again during the tea break.

Viewing Nights

Members Only:

FRI 9th/SAT 10th, FRI 16th/SAT 17th,
 FRI 23rd/SAT 24th July,

FRI 6th/SAT 7th, FRI 13th/SAT 14th,
 FRI 20th/SAT 21st August, all at The Briars, Nepean Hwy, Mt. Martha.

New attendees can contact **John Cleverdon on 5987 1535** if assistance is required, or by calling the **Briars mobile on 0408 127 443**. Remember for security reasons you can only attend on planned Members' Nights, unless by prior arrangement with John who will liaise with *The Briars* accordingly. Last person out must switch on the shed security light. **All attendees must sign the visitors' book in the observatory for insurance reasons.**

* Remember the Society's **8-inch telescope, 80mm refractor, and binoculars** are available for loan to financial members. **Contact David Girling on (0408) 364 754**, or speak to him at a Society function, to arrange the loan of the equipment.

Public, School & Community Groups
Viewing/slide nights

TUES August 17th - Black Rock Primary School at the Briars. Starting time is 8pm. Around 42 students (10-11 yrs) expected - 3 scopes needed.

If you can assist, please contact the Secretary.

The once-a-month basic public viewing nights at *The Briars* will continue on the *first Friday of each month*.

The next nights are **FRIDAY 2nd July** and **FRIDAY 6th August**, all at 8pm.

Welcome to the following new Society member(s):

*Harald and Angela Zerha
Ian Wright
John Robinson*

Current number of members is 165.

Astronomy 2004

The excellent annual Australian publication, **Astronomy 2004**, is still available. The book shows what's in the night sky throughout 2004, and is aimed at all levels of amateur astronomer, from newcomer to expert.

RRP is \$22 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 Society gathering, with Sally Zetter having the residual copies.

As usual, proceeds from the sales go directly towards improving the content of your library by purchasing new books, videos, CD ROMs etc.

A Reminder about E-Scorpius

For the benefit of new members and interested others, the MPAS has an online community at Yahoo called E-Scorpius. By joining this group, you can exchange emails with other group

members and keep up with society events etc.

The best way to enjoy all the features of Yahoo Groups is to sign up for a Yahoo ID, log in, go to the E-Scorpius site and hit "Join this Group". Another method is for me to add you to the group without signing up, but this will mean no access to group features such as photos, polls, files etc. To do this, I will need your name and valid e-mail address. Just send an email to rlpollard@iprimus.com.au with 'new E-Scorpius member' in the subject line.
Richard Pollard

MPAS Bowling night at Frankston Bowl

This event will be held at the Frankston Bowling Centre, Cranbourne Road, Frankston, Saturday, July 31st. If attending, please be there by 18:45 for start at 19:00. Total cost will be \$14.95 for 2 games including Ball and shoes. A deposit of \$5.00 per member is required to be paid by you on or prior to the July general meeting (July 21st). Trophies will be awarded in several areas at the end of the bowling and the bar will be open on the night. Please contact Sally Zetter on 5976 2679 or 0419 342 148 for further information if required.

Free Physics lectures at Melbourne University

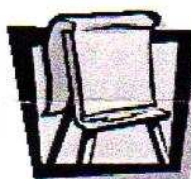
The 2004 July public lectures in physics are soon on at The University of Melbourne, in Swanston St, Carlton. These lectures are FREE and open to the general public, including school children. They are usually very entertaining with practical and imaginative demonstrations. If you drive there, parking is available in the University grounds after hours for \$4, payable into the coin machines there (note: these will likely not be manned so bring the right coins).

When/Where: **8:00 pm Friday July 2**, Elizabeth Murdoch Theatre (adjacent to School of Physics)
Topic: **The 19th Century World Wide Web: the electric telegraph, relativity and the eccentric Oliver Heaviside.**

By: David Jamieson

The first electric telegraph connecting the continent of Australia to the rest of the world was made in 1872. To make this work, the problem of efficiently communicating with Morse code signals down long telegraph wires was solved by a legion of physicists. The most eccentric of these was Oliver Heaviside who almost stumbled upon Einstein's Theory of Relativity before Einstein. This lecture will shine some light on the reclusive Heaviside, the electric telegraph and the emergence of Relativity.

When/Where: **8:00 pm Friday July 9**, Elizabeth Murdoch Theatre (adjacent to School of Physics)



Topic: **The emergence of atoms: Brownian motion and the physics of large systems.**

By: Jeffery McCallum

Are atoms real? Before Einstein chemists were largely convinced but physicists thought they might just be a mathematical convenience. With the discovery of Brownian motion and successful theories of heat that used the statistics of large numbers of atoms, the reality of atoms could be shown indirectly. This lecture looks at how the motion of large numbers of atoms can be treated with statistics to get useful results and how today we can look at single atoms with simple microscopes.

When/Where: **8:00 pm Friday July 16**, Elizabeth Murdoch Theatre (adjacent to School of Physics)

Topic: **Light waves in the luminiferous Aether: real stuff or 19th Century delusion?**

By: Andrew Melatos

At the conclusion of the 19th century, the luminiferous Aether was introduced to explain how light reaches us from the distant stars. Newton would have approved. But something was wrong with the Aether because it continued to elude detection in sensitive experiments. Einstein abolished it in 1905. This lecture looks at the emergence, heyday and extinction of the luminiferous Aether.

When/Where: **8:00 pm Friday July 23**, Murdoch Theatre (adjacent to School of Physics)

Topic: **The ultra-violet catastrophe: the red-hot emergence of quantum mechanics.**

By: Ray Volkas

The light emitted from a red-hot iron proved to be an intractable problem for 19th Century physics. Conventional theories predicted hot objects show glow brightly in the ultra-violet, which doesn't happen. A strange solution to the problem due to Max Planck was to unravel the cosy world of 19th C physics. This looks at the emergence of the quantum from the ultraviolet catastrophe.

Observatory Mobile Phone

There is now a mobile phone at the Briars observatory to enable members to phone ahead to see if the site is attended. It should be remembered however that this phone is **not** for general use and only calls *to* the phone should be made, the exception being in case of emergencies (i.e. Police, Fire or Ambulance, not if you've left all your eyepieces on the kitchen table!). Instructions for use will be posted in the shed. The number is for this phone is 0408 127 443. For further info or if you have a problem, contact **David 0408 364 754** or **Marty 0409 966 767**.



Recent Events

The Transit of Venus, June 8

For the first time in 122 years, the planet Venus performed a spectacular transit of the Sun on the afternoon of June 8, local time.

This was an experience shared by many members of the Society and others from a wide variety of locations using an equally wide array of techniques. David Girling noted that everything came together on the day, most importantly the weather to provide a wealth of observational information and vivid memories. Here is a summary of those experiences.

David Girling:

"Marty Rudd, Neil Hewson, Mark Hillen and I pondered all morning what to do. Marty, Neil and myself decided to pack the car up and head north, with Mark staying in Tootgarook. We finally found a place in Gisborne and set up at 2.30pm. How we finally found a spot is a long story in itself. Our set up was my 10-inch LX200 with a full aperture Solar Filter, with a CCD video connected, the signal was then sent to Marty's digital video camera. We knew this would work from testing last Sunday.

What we didn't expect was a Gisborne High School teacher setting up next to us, as he picked the site we were on a few days earlier. The teacher, Andrew, was shocked to find us there and was overwhelmed by our set up. He was using a Celestron 5 inch and projecting the image. I did remind him not to keep it on the sun to long, don't want to melt an eyepiece!

His students are studying Astronomy in year 11. So come one come all: we were busy keeping everyone happy and everyone got a look. We also had Marty's camera set up and Neil's binoculars projecting the image. We also had an Astrophysics student from Melbourne University join us as well, she videoed what we had on our screen.

I would have to say what we managed to get on video far exceeded my expectations; we got some absolutely fantastic footage of the black drop effect.

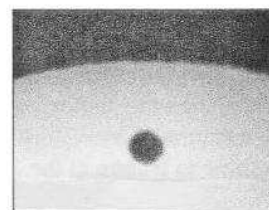
Marty and I were overwhelmed at our results. All in all what a great trip, sad about the traffic home, my God that Monash Freeway is hopeless at that time of night!

Bruce Tregaskis :

"My 19 year old grandson, Christopher, and I set up projections of the Sun and Venus using a 6" and a 4" reflector, in our back yard in Mt Eliza. Considering the excellent weather we had, at least in the early part of the transit, we had no trouble in picking up Venus, as a small dent in the limb of the Sun, at 3.08.45 pm on 8 June 2004. This was no doubt some time after first contact. Venus was easily seen as a very black disc compared with the much fainter small sunspots near the centre of the Sun. I made second contact at 3.25.39 pm, whilst

Christopher made it at 3.26.37 pm. The black drop effect and the not so perfect seeing made timing very difficult. We watched Venus slowly move across the Sun's disc until I had to go out for about an hour. When I returned shortly before Venus and the Sun went behind trees, Venus had moved further onto the Sun, but still had a long way to go I also took three photos of the projected image. This transit was much easier to see than transits of Mercury that I have seen in past years."

Richard Pollard:



"I had worked the previous night till 6:00am and slept till about 1:30pm. I

wasn't really planning on doing much more than observing the transit via projection through my trusty 90mm refractor, and taking a few shots with the digital camera. I also set up an old SLR with a makeshift filter to get some film exposures, but unfortunately the camera body had a few light leaks and the results were-not the best. I guess that's what you get for \$50. I wasn't about to risk my good SLR by pointing it at the Sun!

I got the first stages surprisingly well and my neighbour, Mark, was keen to have a look, so after explaining the events significance to him, he rushed off to get his digital video camera, returning to record the projected images.

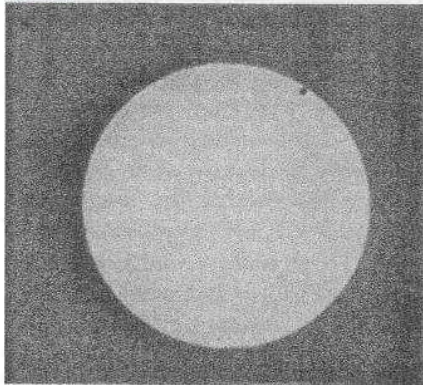
Mark has all the latest in high tech cameras and computer editing systems, being a semi professional photographer, and presented me a few days later with a DVD of the recording, as well as another CD-ROM containing short movie files for easier sharing. Some people have terrible neighbours, but not me!"

Ian Sullivan:

We could have gone to Broken Hill but going east from Mildura seemed more appropriate from the weather maps. We headed for Hay NSW but stopped about 30 km West of it around 2 pm at a wayside rest stop.

There was a little thin cloud but a very clear horizon. We set up only about 15 m from the road and watched through Jim's 6" Newtonian and photographed through my Questar and Jim's 600 mm telephoto lens. We gave several visitors a look and projected their binoculars on to paper to see it on a solar image no larger than a dollar coin. We observed it down to the horizon and I took several photos of the flattened Sun with Venus on it.

At Melbourne Observatory the Botanic Gardens got 500 - 700 people and raised about a \$1000, and ASV raised a similar amount using the top level of Victoria Gardens car park at Richmond. Barry Clark re-installed the photo-heliograph at Melbourne Observatory but not quite in time to feature in the media.



©Ian Sullivan

They even had some clear sky in Tasmania at Hobart and Campbell Town for the big celebration but cloudy at Launceston. Canberra was also clouded out.

PROFESSOR WILSON AND THE RECENT TRANSIT OF VENUS

The recent transit of the planet Venus across the Sun on Tuesday June 8th has a local historic precedent - the observation by Professor Wilson in Mornington in 1874.

Born in 1826, William Parkinson Wilson graduated with an MA from Cambridge University England, and became founding Professor of Mathematics at Queen's University in Belfast, Northern Ireland in 1849. He also had more than a passing interest in astronomy, and he built a small observatory at the University.

However in 1854 he accepted the

position of founding Professor of Mathematics at the new Melbourne University, and sailed to Australia. Duties commenced in 1855 and again he involved himself in astronomy, though not at the University. He observed the sky, and communicated with the staff of the Williamstown Observatory on events like Donati's Comet of 1858.

With the establishment of Melbourne Observatory adjacent to the Royal Botanic Gardens in 1863, he was appointed to its Board of Visitors. He was then prominent in obtaining for it, the Great Melbourne Telescope, the world's largest fully steerable reflector, which arrived in 1869.

Since Captain Cook observed the planet Venus in transit (passing across the Sun) in 1769 the world had waited for another opportunity to use timing of this event to estimate the Earth -Sun distance. The event came on 9 Dec 1874, and Wilson was chosen by Government Astronomer Robert Ellery to observe from near Venice Reserve, Orchid Ave near his house at 38 Wilsons Rd Mornington (then on the corner of Nunns Rd, and now the home of Mr & Mrs Fallaw, see back page photo) He was assisted by two students Messrs Oliver and Cook, using the Melbourne Observatory 4.5 inch refractor with a special sun filter.

The weather on the big day began badly - *'Dense clouds, with thunder and lightning'*, but it cleared and although first contact was lost, at sixteen seconds before noon he saw the small black disk of Venus fully on the bright solar disk. Despite further cloud he also saw the planet reach the other edge of the Sun just before 3.30, and completely gone just before 4 pm. His results were sent by Ellery to Greenwich Observatory with those from the other sites at Melbourne, Glenrowan, and Sandhurst (Bendigo).

After the event Wilson returned to his house to correct exam papers, but suffered a heart attack and died two days later, aged 48. He never married and is buried at Mornington Cemetery. Professor Selleck of Melbourne University is currently writing his biography, while in a recent university publication he is called a 'choleric mathematician.' Nevertheless he played

a significant role in our early scientific history.

Ian Sullivan

Telescope Learning Day

Cold weather saw only around half-a-dozen members turn up at the Briars on Saturday 24 April for the TLD. David Girling talked about 'Projects for your Telescope', the different types of observing that can be done; and also mentioned various reference sources. Star chart software was also shown, and discussion about observing took place. **Editor: My apologies for missing this in the previous edition.**

Public Viewing Night, May 7

The monthly public viewing night is proving to be a success despite the weather being less than perfect this time of year. May 7th was another example of this, with around 50 people showing up undeterred by what Peter Lowe described as 110% cloud cover. I presented the slide show in the comfort of the Visitors centre while others ventured outside in the vain hope of getting some scope time.

Public Viewing Night, June 5

Another night of typical winter weather didn't put off a capacity crowd enjoying the MPAS's first multimedia show, with the slide projector in semi-retirement. In all three presentations were shown due to the inclement conditions; the first by Peter Lowe on the upcoming transit of Venus, the second by myself highlighting the 3D images from the MER (and other assorted anaglyphs from other missions) while the third was the Solar System show. I hadn't intended to show this one as yet, but the interest was such I agreed, and did a run through.

Richard Pollard

Messier Night, May 22nd

With such a gloomy day, who would have thought that the night would clear? Well, it did, and 10 members arrived for our run at the Messier list. With 82 objects to hunt, setting up early was an advantage! Some missed the boat!!

John Cleverdon with his 6 inch Dob did

well with 71 objects for the night. John is a very good observer. Well done, John. I got 79 but a Go To is an advantage (we do live in a new age!) I'm not sure how everyone else did; maybe they can report how they went.

The night was hampered with cloud but it was great fun and all who attended I'm sure had a good time. We finished around 2 am with Greg, Alios and myself left to pack our weary eyes to bed.

Well done to all Observers.
Regards, Dave.G.

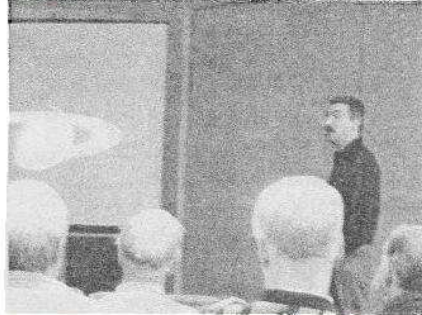
Meetings

The June meeting on a mild night was chaired by the President and saw 45 in attendance in the tearoom as the usual theatre was occupied with a school function. The transit of Venus was the order of the day, with several speakers presenting on their recent local observations. Bob Heale gave a computer simulation of the transit, followed by Ian Sullivan showing slides taken from north of Melbourne. Peter Skilton presented a PowerPoint sequence of the Venus transit taken from the base of Oliver's Hill in Frankston via solar filter. Richard Pollard showed a DVD of his projected image of the transit from Cranbourne. John Cleverdon was presented with an eyepiece for his Herculean observation manually by star hopping during the recent Messier marathon.



Following a short break, and drawing of the book raffle, when the assembly looked at other photos of the transit from Bairnsdale by Greg Walton, Ian Porter, a well known local physics teacher at Mornington Secondary college, presented the main talk on the Cassini Huygens probe to Saturn which was almost ready for orbital insertion on July 1st. This probe effectively used gravity assist from Venus and Earth flybys in order to accelerate considerably in order to reach Saturn

and Ian explained the subtle difference between gravity assist and slingshot. A cardboard model of the probe downloaded from the Internet and assembled by Ian was passed around for inspection by the audience. An animation of the recent flypast of the moon Phoebe was projected on the wall, demonstrating the three dimensional rotation of this satellite of Saturn.



Ian explained that there was about a 40 percent chance that the probe rocket will not fire correctly and it will continue into deep space without being placed into Saturn orbit. If orbital insertion is successful, the spacecraft will release a probe called Huygens that will go down onto Titan on Christmas day. What the surface of Titan holds is still unknown, even to the extent of knowing whether the surface is solid or liquid. This is because of the very thick atmosphere around Titan that shrouds its surface. At its launch the spacecraft was very controversial due to its Plutonian radioisotope Thermal Generators which will provide for all its power needs for decades to come, as this presented a potential danger to Earth during its gravity assist flyby of Earth.

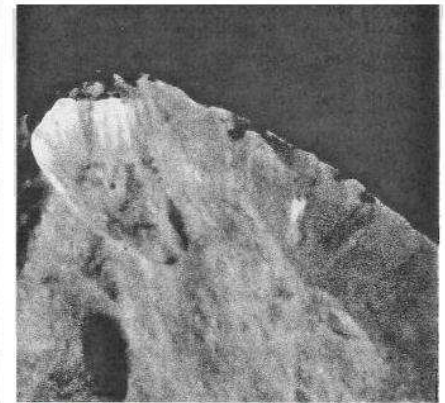
After question time, Marty Rudd, David Girling and Neil Hewson then presented a short video of the Venus transit to suitable accompanying Venus music by Bananarama. This video sequence was captured from Gisborne, demonstrating to a local school group that serendipitously set up at the same observing site. This video showed a very pronounced black drop effect – much more so than any other reported observation locally. Meeting closed at 10:10pm.

NEWS

Phoebe's Surface Reveals Clues To Its Origin

Images collected during Cassini's close flyby of Saturn's moon, Phoebe, have yielded strong evidence that the tiny object may contain ice-rich material, overlain with a thin layer of darker material perhaps 300 to 500 meters (980 to 1,600 feet) thick.

The surface of Phoebe is also heavily pitted with large and small craters. Images reveal bright streaks in the ramparts of the largest craters, bright rays which emanate from smaller craters, and uninterrupted grooves across the face of the body.



Cassini image of Saturn's moon, Phoebe. (JPL NASA)

"The imaging team is in hot debate at the moment on the interpretations of our findings," said Dr. Carolyn Porco, Cassini imaging team leader at the Space Science Institute in Boulder, Colo. "Based on our images, some of us are leaning towards the view that has been promoted recently, that Phoebe is probably ice-rich and may be an object originating in the outer solar system, more related to comets and Kuiper Belt objects than to asteroids."

In ascertaining Phoebe's origin, imaging scientists are noting important differences between the surface of Phoebe and that of rocky asteroids, which have been seen at comparable resolution. "Asteroids seen up close, like Ida, Mathilde, and Eros, and the small Martian satellites do not have the bright 'speckling' associated with the small craters that are seen on Phoebe," said Dr. Peter Thomas, an imaging team member from Cornell University, Ithaca, N.Y.

The landforms observed in the highest resolution images also contain clues to the internal structure of Phoebe. Dr. Alfred McEwen, an imaging team member from the University of Arizona, Tucson, said, "Phoebe is a world of dramatic landforms, with craters everywhere, landslides, and linear structures such as grooves, ridges, and chains of pits. These are clues to the internal properties of Phoebe, which we'll be looking at very closely in order to understand Phoebe's origin and evolution."

"I think these images are showing us an ancient remnant of the bodies that formed over four billion years ago in the outer reaches of the solar system," said Dr. Torrence Johnson, an imaging team member from NASA's Jet Propulsion Laboratory, Pasadena, Calif. "Battered and beat-up as it is, it is still giving us clues to its origin and history."

Phoebe may be an icy interloper from the distant outer solar system, which found itself captured by giant Saturn in its earliest, formative years. Final conclusions on Phoebe's origins await a combination of the results on Phoebe's surface structures, mass and composition gathered from all 11 instruments, which collected data during the flyby on June 11, 2004. "This has been an impressive whirlwind flyby and it's only a curtain raiser on the events about to begin," said Porco. ©Spacedaily.com

Private rocket plane completes historic space mission

MOJAVE, California (AFP) Jun 21, 2004
A US rocket plane Monday became the first privately financed manned flight into space in a landmark step toward opening up exploration beyond the Earth's atmosphere.

SpaceShipOne, designed by pioneer engineer Burt Rutan and paid for by Microsoft co-founder Paul Allen, went to an altitude of just over 100 kilometres (62 miles), said Rutan's company, which admitted problems had prevented the craft reaching its target altitude. The craft returned safely to Earth after about 90 minutes to be acclaimed by Rutan, Allen and about

10,000 thousand people at Mojave airport in the California desert.

"It was a mind-blowing experience," said Mike Melvill, the 62-year-old South African-born pilot who was at the controls of SpaceShipOne for the historic flight. "You have got a hell of a view from 62 miles," he added.

The rocket plane was launched from a specially made jet, named White Knight, at an altitude of 15 kilometres. Its engine ignited for three minutes, powering SpaceShipOne (SS1) into the fringes of space before it fell back to Earth, the mission control said.

Rutan said SS1 had reached 328,491 feet (100.12 kilometres), farther than any other privately financed mission into space. Melvill gradually took control of the craft again and from 25 kilometres altitude; it glided for about 17 minutes back to the landing.

Rutan admitted a steering problem had forced organisers to cut back the mission. "We did get there -- 328,491 feet," Rutan said. "We were going to go to 360 but these anomalies meant that we barely got over." The problem was in the flight controls. "It was no big deal in terms of safety but it was not a smooth flight in terms of trajectory," he added. "The anomaly we had today is the most serious flight safety systems problem that we have had in the entire program and the fact that our backup system worked and we made a beautiful landing makes me feel very good. The backup systems worked."

After his landing, Melvill paid tribute to Rutan's expertise.

"This could not have been done without the brilliant brain that this guy has," he said. "He thought it out, he thought of everything to make it work and it worked exactly as he thought, even though we argued with him and threw up roadblocks."

Rutan also developed Voyager, the aircraft which in 1986 became the first to go around the world without refuelling.

Rutan said some "risks" had been taken in the design of SS1 -- but most of it was the same as his first conception in 1999.

At 15 km the liquid and solid fuel engine propelled SS1 upwards at a speed of about 3,500 km/h to a height of some 50 km above the planet. When the rocket's fuel had been spent, SS1 kept going up for about three minutes.

"The flight is a milestone that may lead to a new space age," Rutan said. "There is an enormous hunger to fly in space and not just to dream about it. The new private space entrepreneurs have a vision. We do want our children to go to other planets."

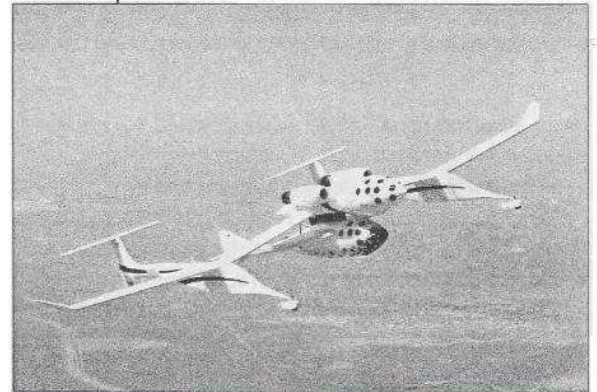
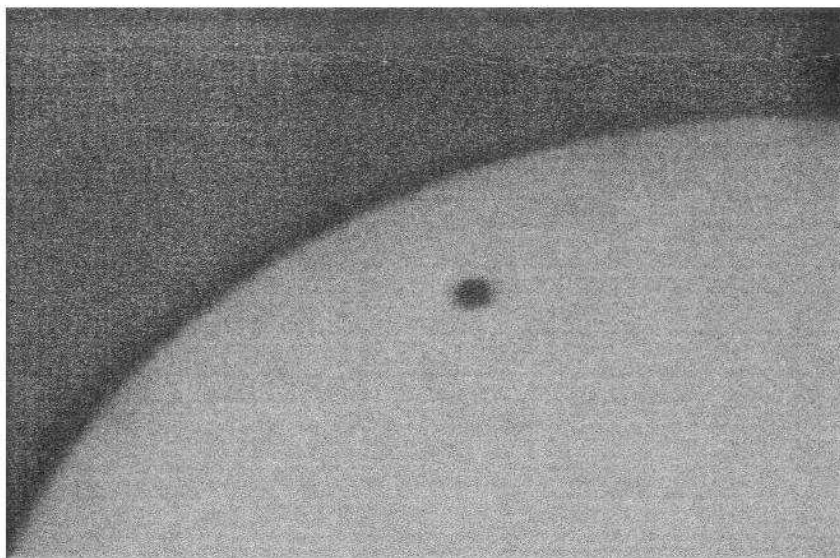
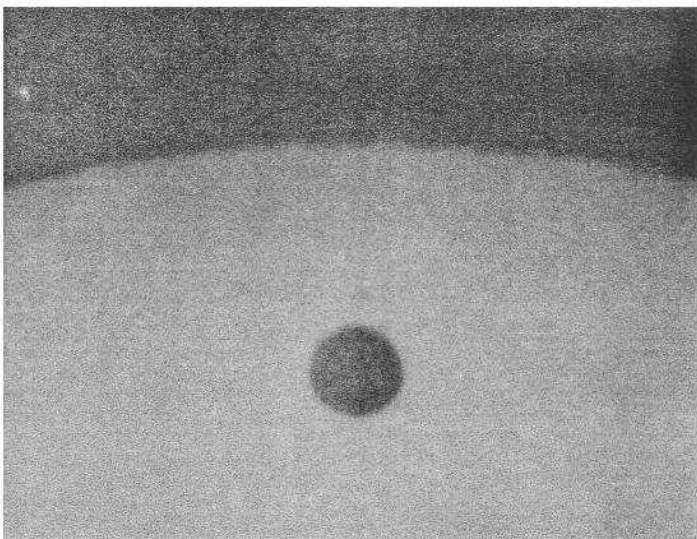
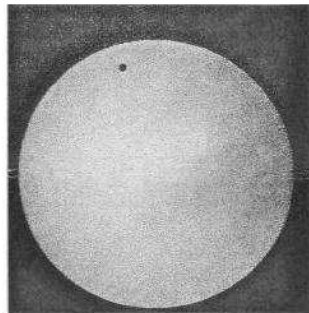
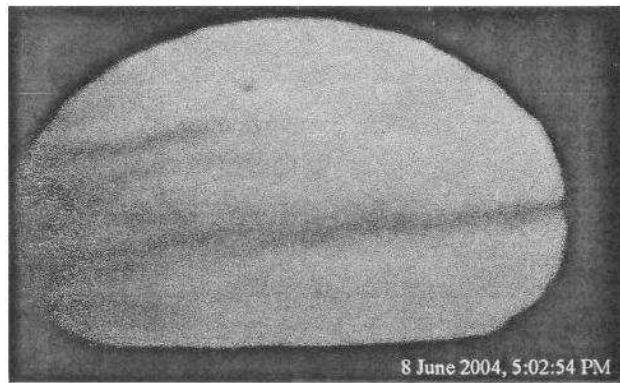
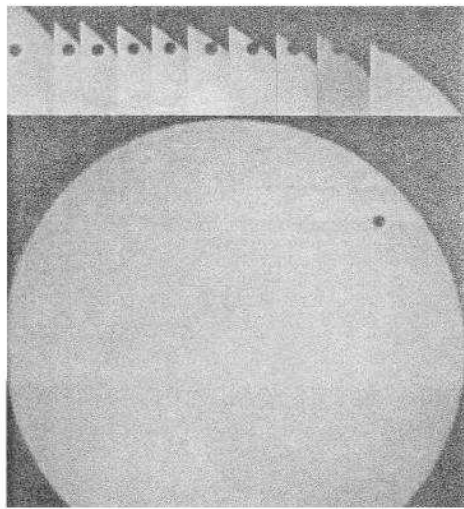
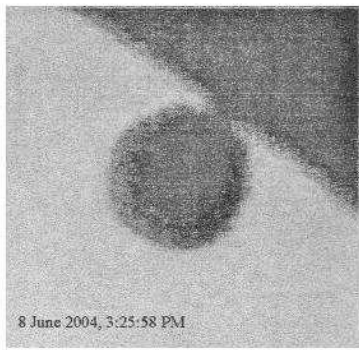


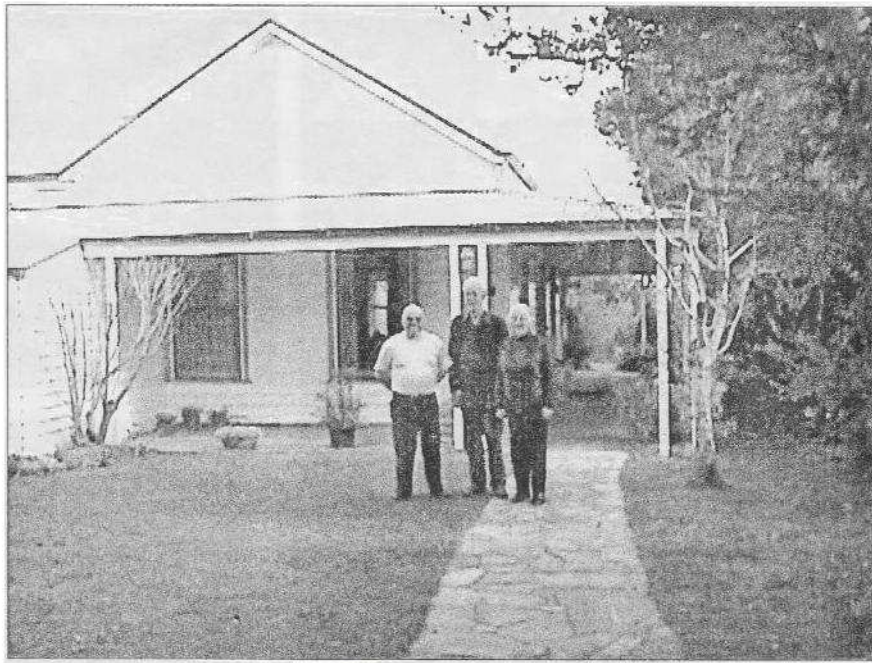
Figure 1 SpaceShipOne is carried aloft by White Knight on its historic flight.

Sean O'Keefe, chief administrator of the US National Aeronautics and Space Administration, which has dominated space exploration for the past 40 years, paid tribute to the newcomers. "They are doing much to open the door to a new marketplace offering the experience of weightlessness and suborbital space flight to the public. We applaud the remarkable achievement of Burt Rutan, Paul Allen and test pilot Mike Melvill."

Rutan is also eyeing a 10-million-dollar prize for the first privately funded space vehicle that can carry two passengers and a pilot to an altitude of 100 kilometres (62.5 miles) twice in two weeks. The Ansari X Prize has been offered by the X Prize Foundation, in a bid to encourage commercial space travel. About 25 teams from seven countries are said to be in contention. ©Spacedaily.com

If you have something you'd like published in Scorpius, e-mail it either in a document or text file or as part of an email to: ripollard@iprimus.com.au Or post it to 9 Genista Rd, Cranbourne 3977.





Peter Lowe with the current owners of Prof. Wilson's residence.



Left - Working Bee at the MPAS Briars site on 6th June 2004

Photo - By John Cleverdon

Venus Transit in powerlines taken with Pentax SLR 500mm lens with 2 x convertor
JMI etx solar filter ISO 400 film 1/125sec By Greg Walton Bainsdale Vic 8Jun2004



(No this is not Jupiter with a moon shadow)

Above - Transit of Venus 8th June 2004

Photo - By Greg Walton

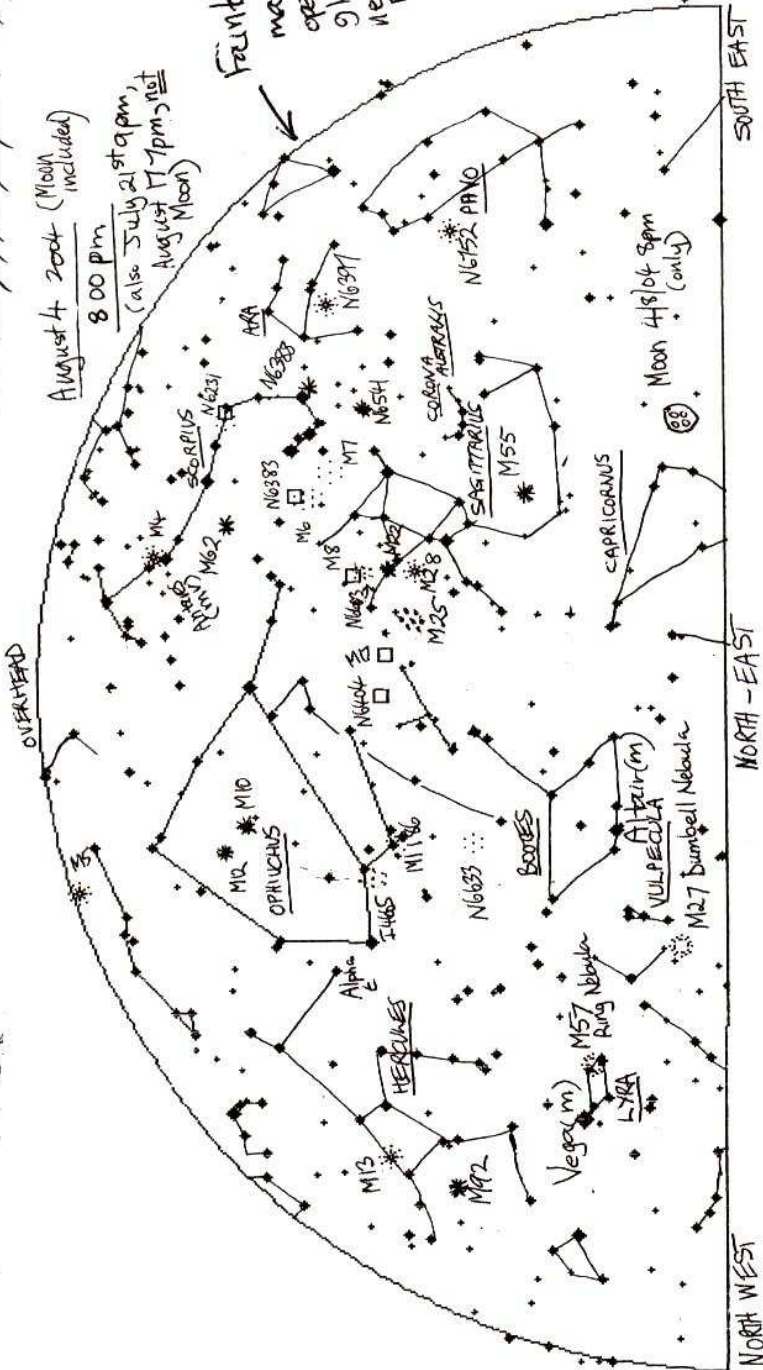
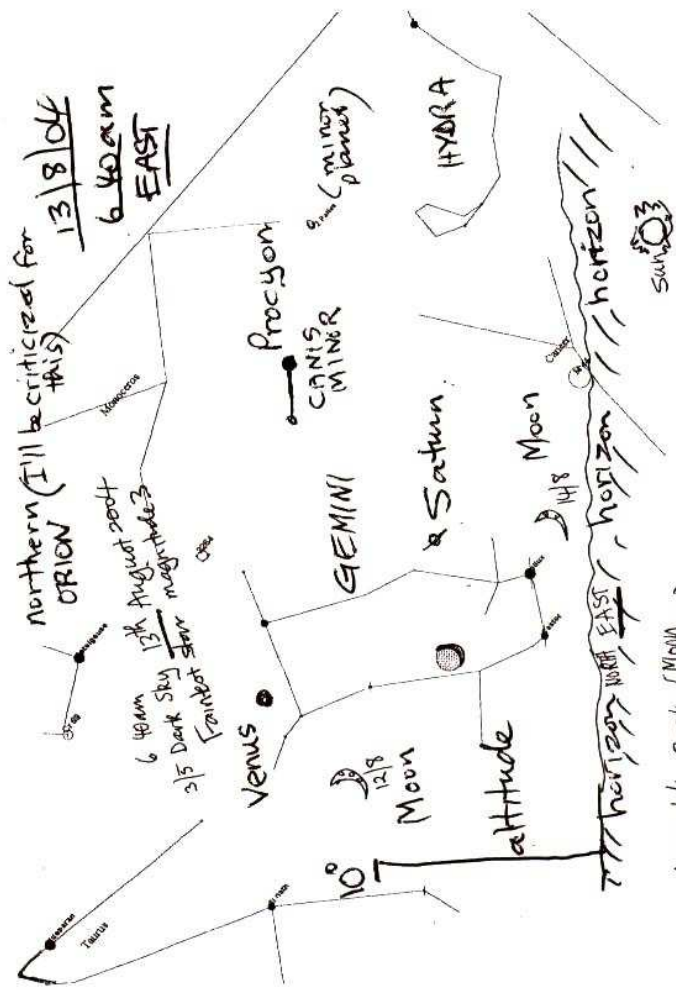
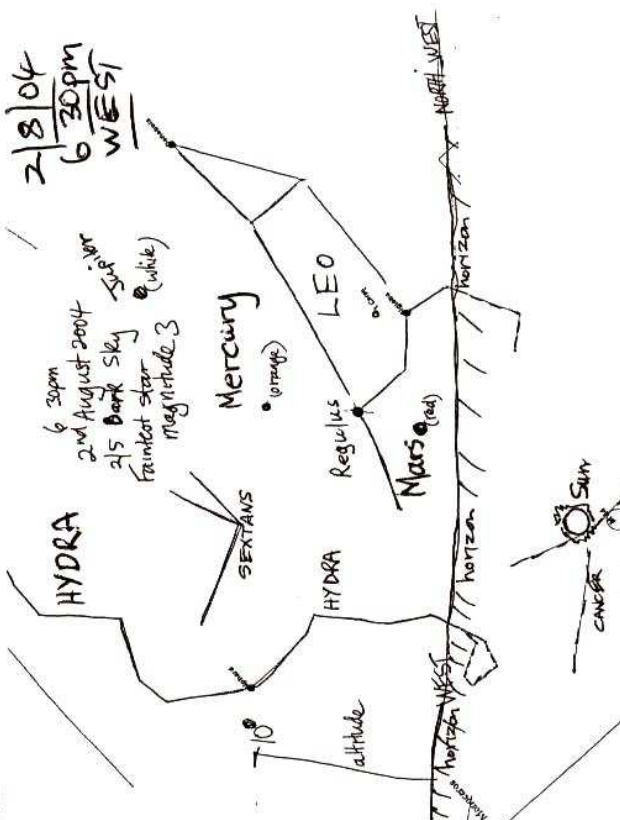


Left - MPAS 10 Pin Bowls at Frankston on 31st June 2004

Photo - By John Cleverdon

Kindly reproduced by Jane McConnell and collated/posted by Mary Westaway

SKY FOR THE MONTH 21ST JULY TO 17TH AUGUST 2004 MORNINGTON



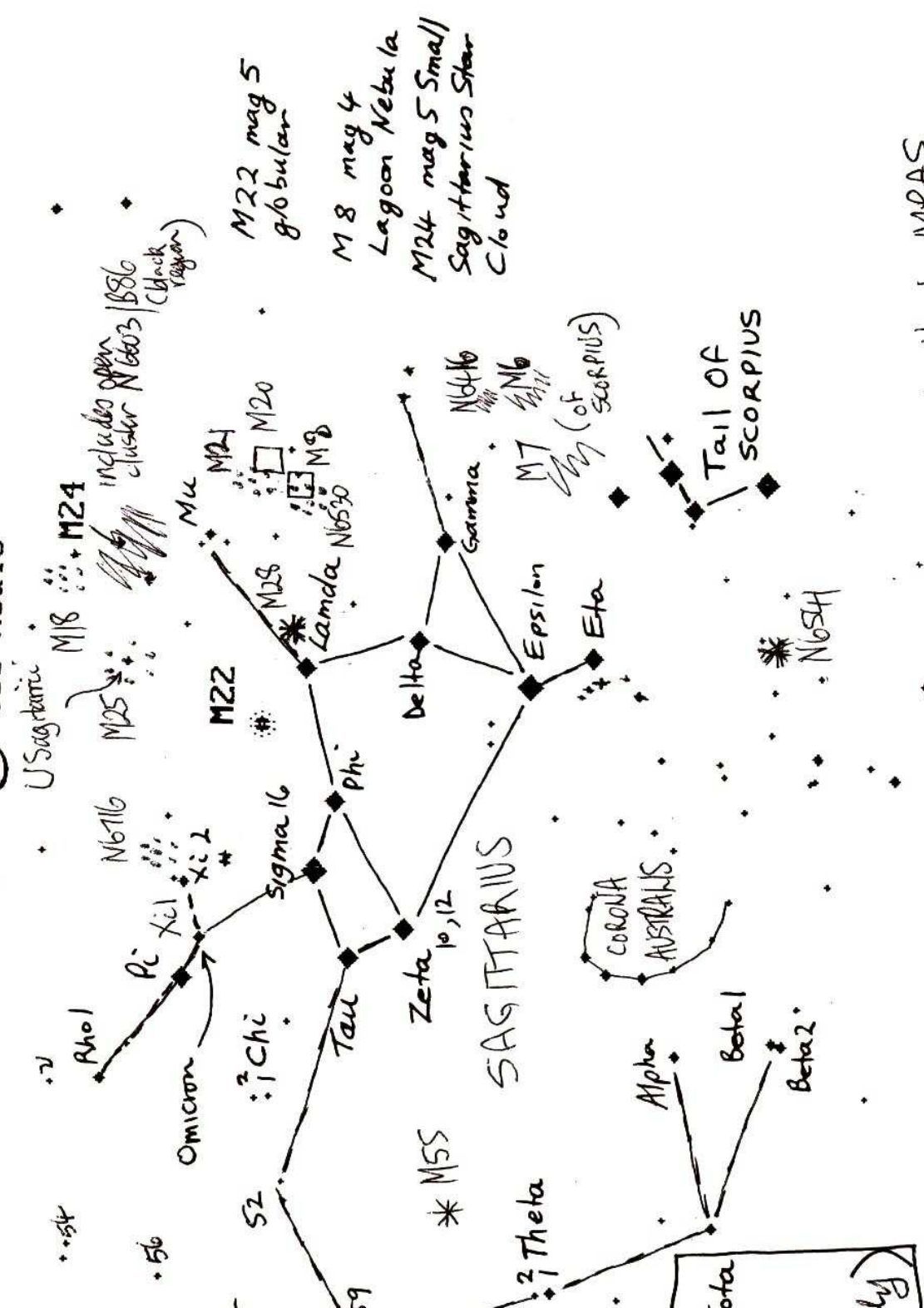
Will concentrate on easy SAGITTARIUS objects in talk

Faintest star magnitude 4
open clusters 6
globulars 7
nebulae galaxies 7-5

Bob Heale MPAS 20/7/2004

All objects no farther than 5.45

U1 © Bob Heale



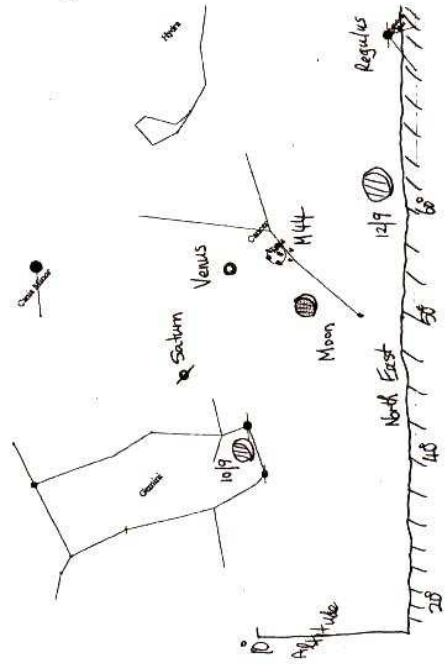
Epsilon, Delta, Gamma
good colour contrast
Eta brilliant orange
white companion
Lamda field is 60
delightful :-
doubles
globulars

planetary nebulae
(N6644) the mag 9
globular N6638 is
in same field; N6629
is about 1.5N of globular
M28; N6818 lovely
planetary near 54
Sagittarii; N6565
planetary near Gamma
Sagittarii - all for
experienced observers only

Bob Heale MPAS
20/7/2004

SKY FOR THE MONTH 18 AUGUST TO 14 SEPTEMBER 2004 MORNINGTON PENINSULA

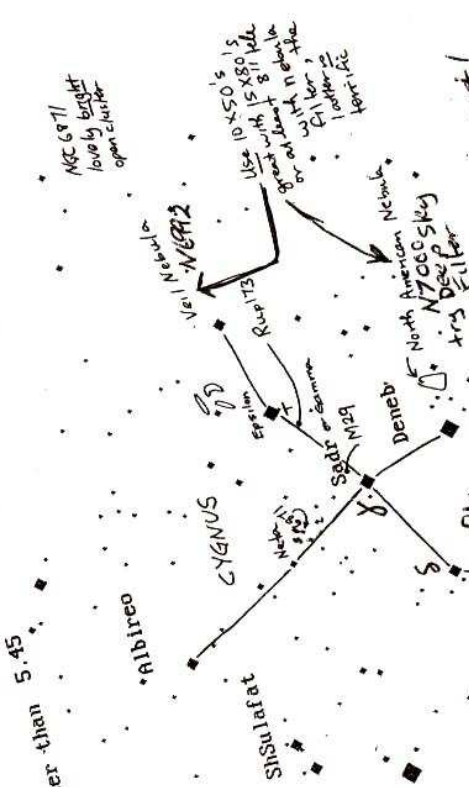
From our Earth, the planets Mercury, Mars and Jupiter, are in the glare of our Sun and are not visible, and your eyes are at risk if you try (without current proper filters)



5:39pm North-East 4:5 Dark Sky 11th September 2004 Standard Time
Faintest object of magnitude 4

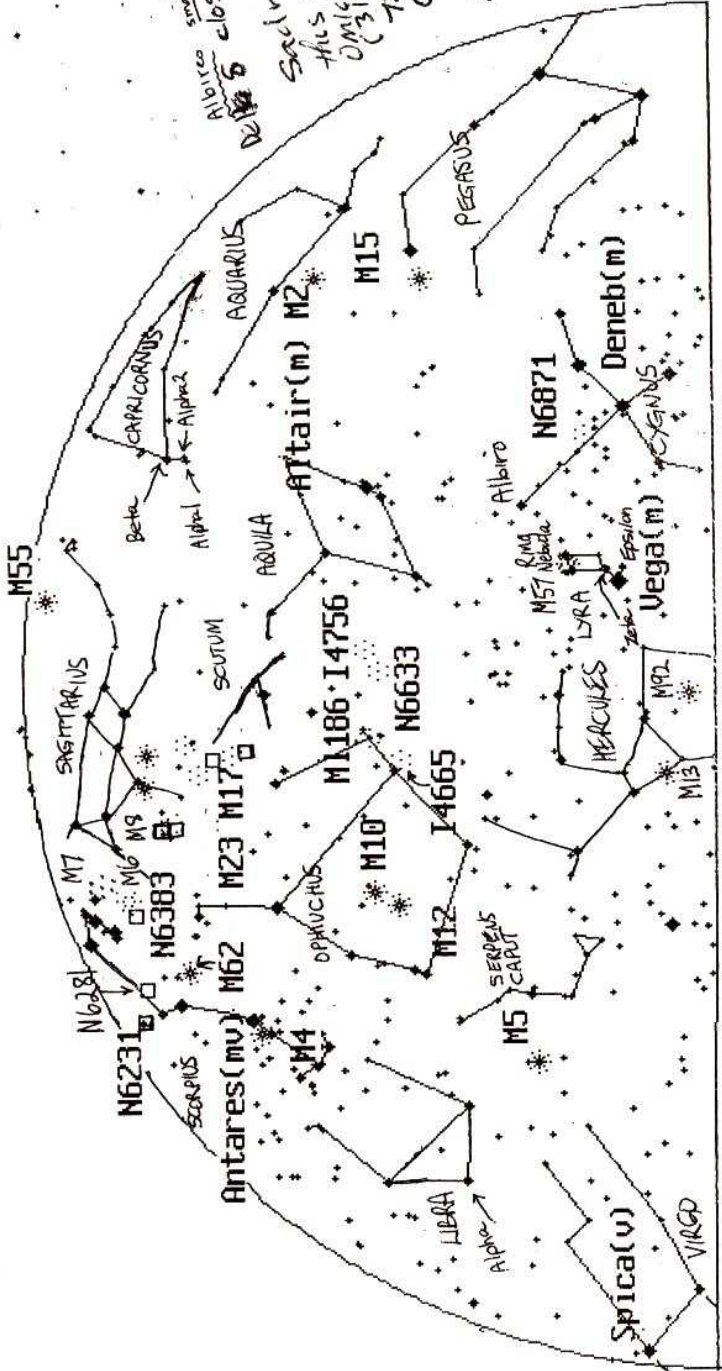
All objects no fainter than 5.45

1x Sky View the Northern Cross



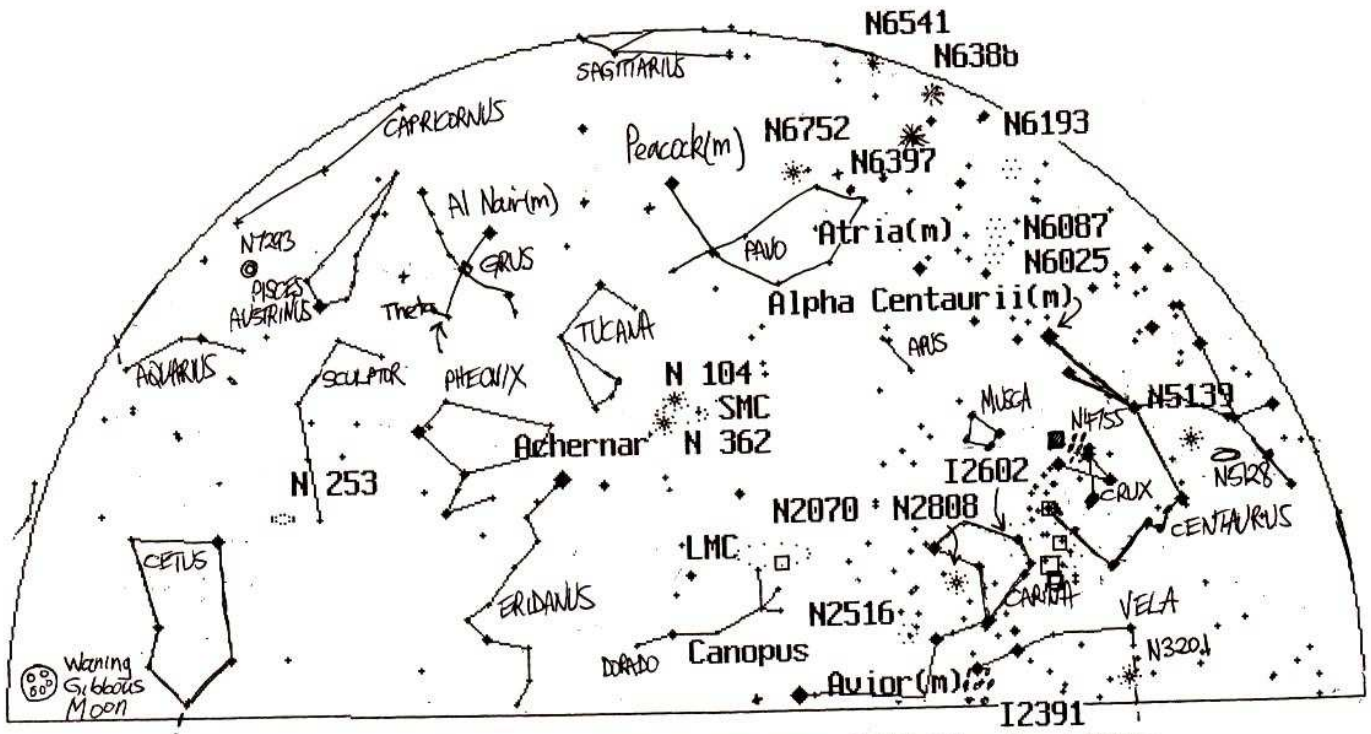
Use 10x50's or 15x80's or good mount & tripod with nebula filter, or a light pollution filter.
MCE 6871 lowly bright open cluster

Use 10x50's or 15x80's or good mount & tripod with nebula filter, or a light pollution filter.
North American Nebula
N7000 Sky & Deep Filter
small telescope double magnification is 2x blue filter
Albireo close all telescope double magnification is 2x blue filter
Sadr (Gamma) nebula patches are around this star so Cygnus form because of Albireo (Delta) double magnification is 2x blue filter
Tally tally like a wider version of Albireo
01 Orion
Heaps of double and multiple stars in sky at left: Alpha and Beta Capricorni, Alpha Librae, Zetalyrae & Lyrae (double-double), Zetalyrae

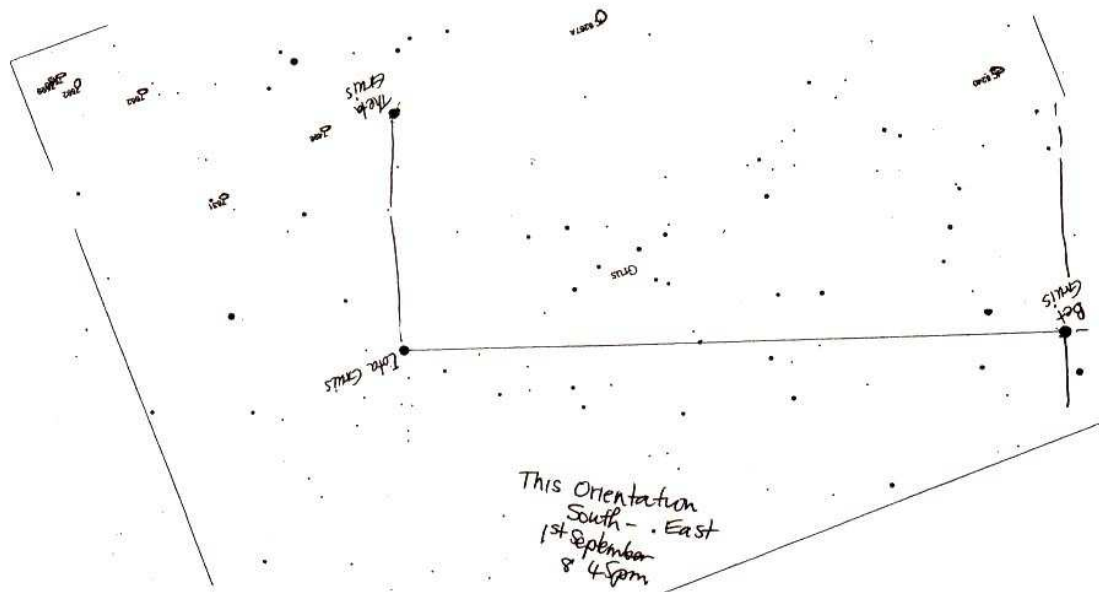


Bob Heale MPAS 17/8/2004

8:45 pm 1st September NNW Night Sky 2004 Standard Time
Also 18th August 9:45pm and 14th September 7:45pm (all dark - no planets or Moon)



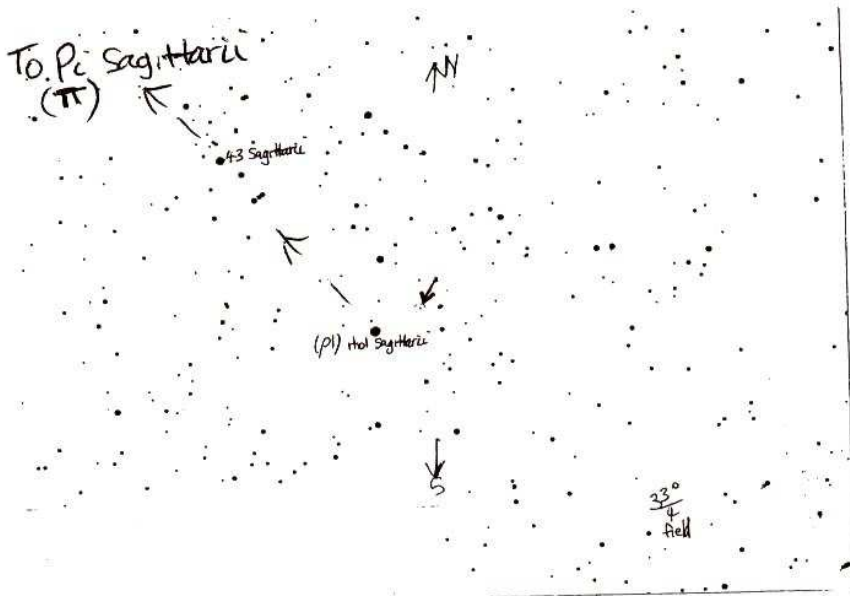
8:45 pm September SSE Night Sky 2004 Standard Time
 Also 18th August 9:45pm and 14 September 7:45pm Moon 1st September only



Some GRUS galaxies near Theta

This Orientation South-East
 1st September 8:45pm

Bob Heale MPAS
 17/8/2004



At left, where \downarrow points is a true equilateral triple star, $19^h 23^m 24^s -18^\circ 0' 0''$, known as or known star h 286 in middle