



PRIME FOCUS

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PRESIDENT'S REPORT

Hello and welcome to our final issue of Prime Focus for 1998. I wish to thank everyone involved in the writing of articles and our

Editor for the fine work and quality of our Journal. It has been a very enjoyable year, with many speakers coming to enlighten us on the subject of Astronomy.

Here is a brief summary of the Society's year:

January was the SETI Conference with guests such as Paul Davies, Frank Drake, Paul Butler - the list was endless. Southern Serendip was put on line and linked from Parkes Radio Telescope to UWS.

February - Our first big meeting for 98. The guest speaker failed to show so Noel stepped in and entertained us with a very interesting talk on using a telescope.

March saw us conduct our AGM and also the

enlightening Ken Peterson on Light Pollution.

April - Special, special, special night. After a very enjoyable meal at Sizzlers with our guest speaker, we all battled the driving rain to the university to hear Bob Evans speak on Supernovae. He also had a small booklet on how to spot these rare but beautiful objects in our night sky.

Ilford was once again on and Eric and Terry from our Society went and enjoyed the clear dark skies.

Following Ilford, I attended the annual national Amateur Astronomers Convention held this time by Sutherland. I heard many great speakers, one of them spoke to our Society later in the year.

The Face On Mars took a nose dive (excuse the pun) as

Global Surveyor all but squashed any hope of an ancient civilisation on Mars.

The Society in numbers came and supported the Macquarie Star Night. Clear skies were on and I believe what seemed like half of Sydney lined up at various scopes and in the hall buying and looking at all different stalls.

May - Fun Trivia Night with Daniel Ross. Next time more space questions will be put to the members.

June - What a great site, we observed at the Alumni site at Belanglo State Forest. Many Society members turned up and were treated to a great feed and an unbelievably beautiful sky. I have never before seen the Coal Sack and Magellanic Clouds jump out at me and appear so devastatingly clear.

June - Andrew James spoke to us in Building 21 on Planetary Nebula. One of the best speakers we have had at our Society.

Star Camp at Carol Farrell's at Wilton - poor weather unfortunately ruined any hope of seeing much this night. We did enjoy a BBQ and socialising well into the night.

July - Ralph Buttigieg spoke to us on the reasons and how we can go to Mars now.

Bob Bee was appointed as custodian of MacDob.

Andy Thomas came home from his long stay on MIR.

August—It just didn't stop raining, and thus our guest speaker Peter Williams was flooded out and could not appear. A video was shown.

Eric Brown resigns at Treasurer (a sad loss).

August 8th saw more rain and a washed out Star Party at UWS. However, we were blessed with guest speaker Seth Shostak who entertained us about searching for that elusive alien and promoting his book "Sharing the Universe".

**November 17th—
Leonids are due to hit in full force... best viewed early in the morning**

August 23rd saw us out with scopes and promoting our Society on the UWS Open Day. After the day was over some of us came back and viewed the clear sky for 20 very interested public. Jupiter was a big talking point. (Finally a fine night).

September - Wilton once again clouded out and rained, however an entertaining time was had by all who attended.

October - Thanks to Bob Bee for showing us the Solar System and Deep Space slides (he was plan D) since it was once again raining., and no guest speaker showed.

24th Oct saw quite a few members attend Cobbity Star Night. It apparently was reasonably clear till 10pm, clouded over, then cleared again till some hearty souls left finally by 2am.

31st October - Open Night at Macquarie was rained out but still over 500 members of the public attended and heard a very interesting talk on Pulsars, plus looked around and enjoyed the displays. MAS has also gained a few members from this night as several public were from the Macarthur region and were very interested in joining.

November - We are privileged to have guest speaker Leon Darcy. At the time of this report he had not yet graced us with his knowledge and wisdom.

November 17th—Leonids are due to hit in full force. Lets hope for clear skies as a few of us will venture to the Uni to view the meteor storm. However, it will be best viewed early in the morning.

FUTURE DATES

Christmas Party—Sunday 6th December, 1pm or thereabouts. BYO food, swimmers and drink. Where? My place 5 Boobook Place, Ingleburn.

MAS is meeting next in January 18th, the 3rd Monday. A general discussion of the years events will take place.

15th February – Our next normal meeting.

15th March is our **Annual General Meeting**, followed by our normal monthly meeting.

March 19th – 21st The Ilford Star party

Saturday March 27th
Macquarie Open Night

April - I have spoken to Alan Vaughan and we are confirming a date for him to come and speak.

17th May—Trivia Night with myself and hopefully Daniel.

Mercury Project

Project Mercury began in 1958 and finished in 1963. 7 pilots were picked to be Astronauts. Scott Carpenter, Gordon Cooper, John Glenn, Gus Grissom, Walter Schirra, Alan Shepard and Donald Slayton.

The prime objective of the Mercury missions was to prove that a man could survive and experience weightlessness in space. All the expected goals were achieved.

Mercury-Redstone 3 Freedom 7

The first American to journey into space was Alan Shepard who unfortunately passed away last month. It was a sub-orbital flight and was over in 15 minutes. Shepard was weightless for 5 minutes. He operated the control jets to manouever the craft.

Alan Shepard was known to say "I had only 30 seconds to look out the window."

The spacecraft successfully splashed down in the Atlantic.

Mercury-Redstone 4 Liberty Bell 7

This was Gus Grissom's flight, and he successfully steered the craft with improved controls. After only 15 minutes, 30 seconds he splashed down but had some complications when the hatch blew off and he started sinking.

The Russians at this stage had sent Cosmonaut Titov on a one day 17 orbit mission on Vostok 2. The enemy in the cold war was well ahead of its rival the U.S.

Next Journal the remaining Mercury flights.

Web Sites

Some great web sites are :
Macarthur Astronomical Society -
<http://btwebsh.macarthur.uws.edu.au/danielR/mas1.htm>

<Http://www.seti.org> (on this site you can get the latest updates and download software which will allow you to have your computer analyse SETI information when it arrives from space.
More sites in next years newsletter/journal

My E-mail address is as follows

Phil@mothy.itd.uts.edu.au

Please call me anytime and I will get back to you ASAP.

Library

The library I am pleased to say is starting to be used.

Many new items are available to borrow for members. All that is required is to write your name next to the list provided on the notice board and next month I will have it at the next meeting for you.

Latest News from NASA SOHO – Launched and Successful so far;

We hope that all SOHO scientific instruments can be returned to the same level of health, so we can resume scientific operations in the near future," said U.S. SOHO project scientist Joe Gurman.

Controllers lost contact with SOHO June 24 when a combination of several problems on the ground, including poor decisions by ground controllers, sent the spacecraft into a spin. The spacecraft was out of contact with the Earth until early August, and its spin was corrected September 16 after its hydrazine fuel thawed.

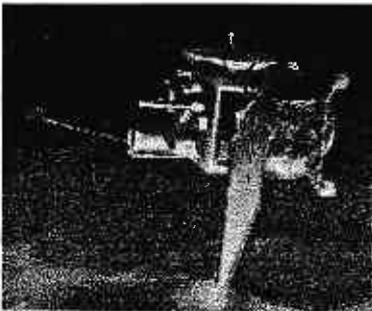
SOHO was launched in December 1995 and completed its primary mission to the study the Sun in April. NASA and ESA then decided to extend SOHO's mission through 2003, so the space craft can monitor the Sun as it passes through the peak of its 11-year activity cycle around the year 2000.

DEEP SPACE PROBE

A little more than two weeks after launch, the spacecraft's ion engine may be tested for the first time. Once it is in

regular use, the engine will thrust for 50 percent of the primary mission.

Deep Space 1 is the first launch of the New Millennium Program, a series of deep-space and Earth-orbiting missions designed to test new technologies for use on science missions of the 21st century.



MARS GLOBAL SURVEYOR

This amazing little probe continues to give scientists some amazing photographs of the red planet. It has just taken some panoramic views of Elysium Basin. Here are the findings:

The close-up views of Mars' Elysium Basin reveal the first evidence of huge plates of solidified lava, rather than lakebed sediments, that appear to have been broken up and transported across the Martian surface millions of years ago as they floated on top of molten lava. This implies that the area in the planet's northern lowlands was once the site of giant ponds of lava flows hundreds of kilometers across, according to Dr. Alfred S. McEwen of the University of Arizona, Tucson, a member of the Global Surveyor science team

QUIZ Answers ⊗ Refer to Sept Journal for questions.

1. Seth Shostak
2. 16th September
3. John Glenn
4. Andy Thomas
5. Ray Bradbury
6. Gene Shoemaker
7. Sarek
8. Global Surveyor
9. Neptune, it is currently the furthest.
10. Russia, Sputnik
11. Sky & Space
12. Jill Tarter
13. 16" Meade
14. Dobsonian, Newtonian Reflector
15. Tom Hanks
16. Alpha Centauri A, B, & Proxima Centauri
17. Milky Way
18. Wilton
19. SETI
20. European Space Agency
21. Alpha Centauri
22. Orion
23. Kessler
24. Sydney
25. Phil's place
26. Broncos (unfortunately)
27. 12
28. Search For Extraterrestrial Intelligence
29. Leonids Peak time 14-20th (17th)

Thankyou all who participated. I apologise for any questions I am wrong. (Phil).

Movie Review - "Sphere"

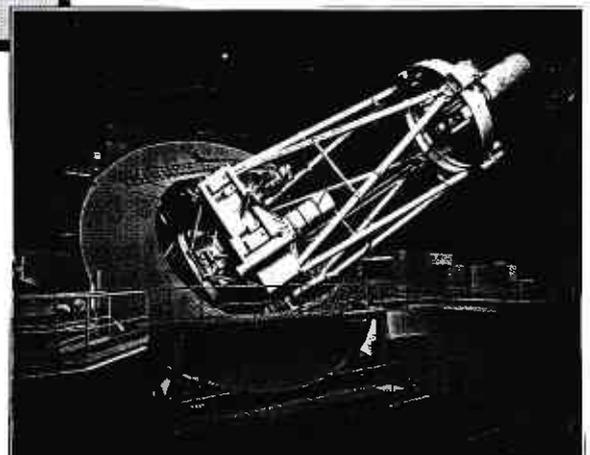
Based on a book by Michael Chrichton, this movie starts off in dramatic fashion. A large craft of strange origins is found at the bottom of the ocean. With stars like Dustin Hoffman, Sharon Stone and Samuel L Jackson, the high drama is kept through out the movie.

Specialist are recruited by the government and taken to a mysterious site, where their critical skills are put to the test. With crew members vanishing at an alarming rate, the three main stars are left to work out what is happening, and how to control their own thoughts.

You don't have to look far to find out where this ship comes from (I mean this in a large sense), but the mission this ship was on would be one I would like to do. The ending here departs from that in the book, as Hollywood special effects take over.

Overall this is a great movie.

Daniel Ross



The Anglo-Australian Telescope (Photo Dr. Malin)

ARA - THE ALTAR

Ara is not one of the better known constellations, but it does have some interesting features.

Located directly below the curve of Scorpius' tail (ie south of Scorpius), it is a relatively faint (brightest star is mag. 2.9) but easy enough to find. November puts it just above the Southern horizon and getting closer later in the year. In fact, now is the last chance to check it out before it reappears in May next year.

The main stars hold no doubles of interest. One has to go to much greater (ie fainter) magnitudes with reference to Burnham or others to search out the double stars. For interest though, the main stars are as follows:

No.	Mag	Colour/Type	l.y.
α	3.0	B-W	460
β	2.9	Orange SG	460
γ	3.3	Blue SG	1800
δ	3.6	B-W	190
ζ	3.1	Orange G	140

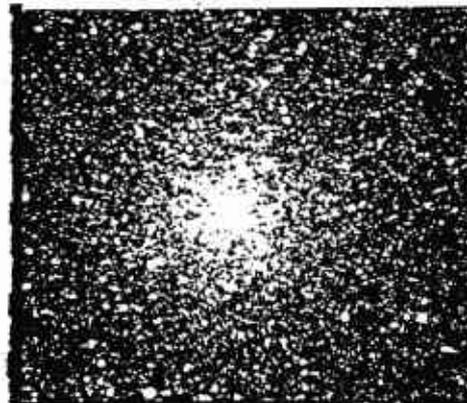
(G = Giant, SG = Supergiant)

The main interest in Ara is in the Open and Globular Clusters. The two most interesting clusters are :

NGC 6397: This is a bright (mag 6) globular cluster, thought to be the closest to our Sun at about 7,200 l.y. It is easily picked up (on a dark night) with binoculars and looks exquisite in a telescope. (In fact, there is an account of the 'nailing' of the identity of this cluster at one of our Wilton star nights in

the August 97 issue of Prime Focus – page 9).

It is not one of the more spectacular globulars, star number-wise, but its proximity helps make up for that. Well worth a look. (17h 41m, -54°)

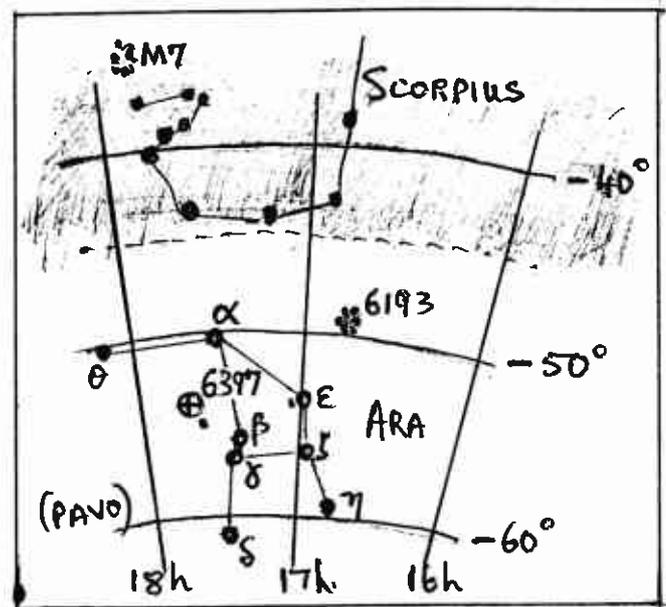


NGC6397 – Photo D Malin
(Used with permission)

NGC 6193 & NGC 6188

This is a combination of a mag 5 open cluster (about 30 stars) and an irregular nebulosity (6188).

The brightest member of NGC 6193 is a Class O Blue-White giant (mag 5.9) with an actual luminosity of ~ 3000 Suns. It has a mag 6.9 companion which modest telescopes should pick up.



The nebulosity nearby (NGC 6188) is of some scientific interest and has been likened the Horsehead Nebula (in character, not appearance). It seems to be the wave-front of an advancing shock wave as the dark cloud expands into space. This is causing emission nebulae, silhouetted against against the associated absorption nebulae (ie dark dust clouds). (16h 41m, -49°)

DOUBLE OCCULTATION

If you were lucky enough to view the occultation of Jupiter on 4th October, imagine what it would have been like to see a simultaneous occultation of Venus and Jupiter by the Moon.

It seems this happened on 23rd April this year, the first time in more than 1,400 years since August 18th, 567 A.D. Wow!

To see it you had to be on a particular spot on the remote east coast of Brazil – with the crocodiles.

PAVO – THE PEACOCK

Not an ancient constellation, but named as recently as the 16th century by Dutch navigators, to join the other feathered constellations in the region – Apus, Tucana, Grus and Pheonix.

As for Ara, Pavo's main stars aren't amazing (unless you live on a planet around one, I suppose). Kappa (κ) is an exception, however. The main features in Pavo of interest to us is in the NGCs.

Pavo is conveniently located just south-east of Ara so you can check out both of this month's constellations side by side.

Pavo's main stars are:

No.	Mag	Colour/Type	l.y.
α	1.9	B-W	360
β	3.4	White	88
δ	3.6	Yellow	19
η	3.6	Yellow G	145
κ	3.9 (v)	Y-W SG	300?
ξ	4.4	Red G	460

κ (Kappa) is of interest as one of the brightest Cepheid variables in our sky. It varies over a period of 9.1 days between mag 3.9 and 4.8. There's something for budding variable star observers to cut their teeth on.

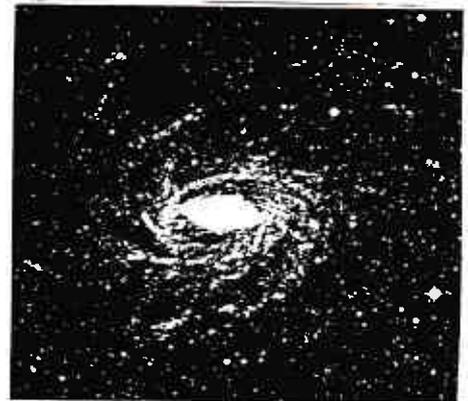
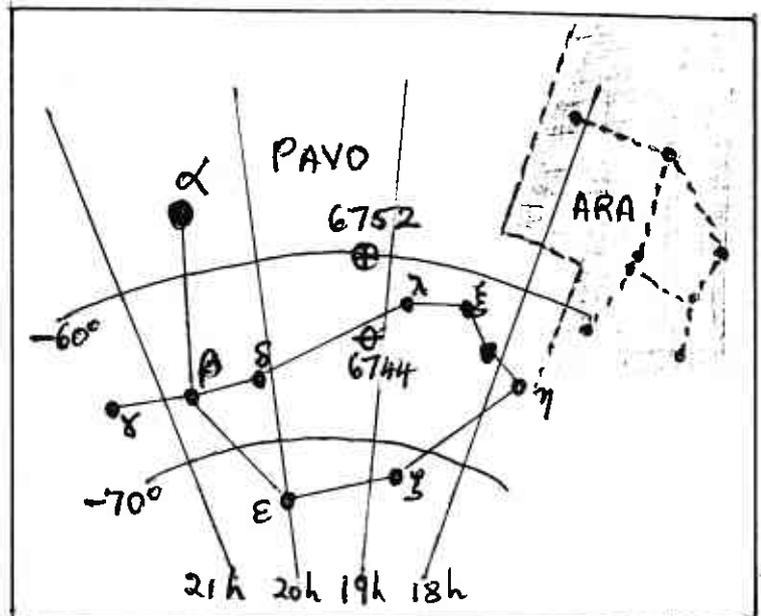
Though loaded with galaxies of magnitudes 11 to 13 for bigger scopes to search out and observe (refer to Burnham or other references), two particularly accessible ones for smaller scopes are:

NGC6752: A particularly fine Globular Cluster. Burnham fairly drools over it (without even having seen it) in his enthusiastic description. I quote: "One of the finest globulars... in apparent size it possibly holds 3rd place, only Omega Centauri and 47 Tucanae appear to exceed it."

It is thought to have been first discovered by the Australian Dunlop at the Parramatta Observatory.

It is visible in binoculars and covers an area about 1/2th the apparent diameter of the moon (ie about 15'). It is thought to be about 15,000 l.y. away. (19h 11m, -60°)

NGC 6744 is a lovely barred spiral galaxy of 9th magnitude. It is one of the largest of its type, with very extensive spiral arms radiating from a very short central bar. (19h 5m, -64°)



NGC 6744 – Photo by D Malin
(Used by permission)

FROM THE EDITOR

This final issue of Prime Focus for 1998 is not the 'bumper' issue I had hoped for. I suspect it's a sign of how busy people are in their lives, and that's OK. I know I am, and for once struggled to get this out on time.

Many thanks to Phil, Noel and Daniel for their regular contributions. And to Peter, Dave, Dick and John for their 'specials'.

I hope to receive articles from You - yes you - in 1999.

MACQUARIE STAR NIGHT

Arriving early with the president, we set about putting up the MAS display. We claimed a number of desks for all our pamphlets and brochures, and for Noel's astrophotos. Peter Druery's framed pictures were like a beacon for our stall. Once the clock chimed six, people started filtering in, despite the light sprinkle of rain.

There were some interesting stalls, like SFN

••• Astro Optical Supplies and Quasar Publishing. We answered questions from not just the local area, but as far afield as Picton and Thirlmere. We seemed to have more people near our display than most others.

The talk on "Quasars - Celestial Clocks" by Dr Richard Manchester was great, but I felt aimed at a level just above the general public.

To sum up it was a great night, considering the weather, and an excellent night for publicity for the Macarthur Astronomical Society, the "Friendly Society".

Daniel Ross

STAR NIGHT COBBITY

I arrived at the gates of Macarthur Anglican High School just as Eric Brown was getting ready to close them, after a short lengthy journey and lots of looks in my street directory. Going cross country to where everybody was parked, the sky was starting to darken with the waxing crescent moon slipping from the sky on its way to setting in the east. The Southern Cross was apparent early as I found the Jewel box after marvelling at it on Eric's CCD image. Jupiter and Saturn were up and gave good views through my scope. It's a shame my binoculars were out because I could have enjoyed the view with those too.

Professor Bee pointed me to M6 and M7, as I view them for the first time through my scope and others. I was also shown the way to 47 Tucanae (Hey that rhymes!). The setting moon also gave us a stunning sight with its glowing crescent.

Things started to cloud over and the only view left was south. There are only so many things you can look at near the south celestial pole. Feeling that there was not much more clear observing to do, I packed up and left, only to be told that the sky cleared up again at around 3 am. Where was I? ZZZZZZZZZZZZZZ!

Thanks muchly,
Daniel Ross

MACDOB:

Bob Bee is 'custodian' of our 150mm MacDob, meaning he will issue and receive the 'scope from those who wish to borrow it.

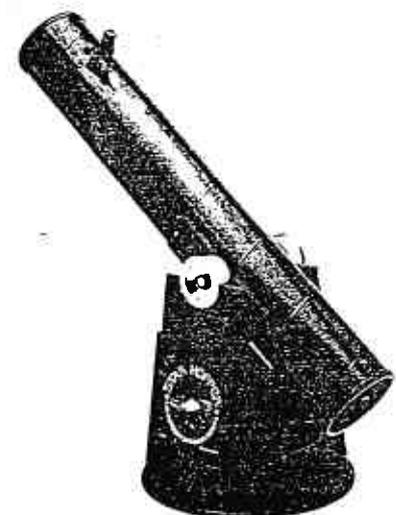
There is no hiring fee for MacDob, but to cover maintenance costs, you are invited to make a voluntary donation consistent with the pleasure that MacDob has given you.

Borrowings are usually from one meeting to the next, but in times of heavy bookings, it may be shorter.

Members are advised that they will be asked to sign a form acknowledging receipt of all the components, and also accepting responsibility for any damage to the 'scope while in their care (other than reasonable wear and tear).

It's very easy to use, so why not borrow it to increase your star viewing pleasure. That's what it's there for.

Contact Bob Bee on (02) 46251623 for your loan of MacDob. ■



THE BALD SPOT

It's been a long time between drinks so the observing night at Cobbity on 24th October was eagerly anticipated.

Over a dozen members were there with scopes of all sizes and descriptions and a clear westerly horizon greeted us. The northern aspect was disappointing with heavy cloud cover threatening to spread over our then clear southern skies.

...the Society and I wish to thank Macarthur Anglican High School and especially Eric Brown...

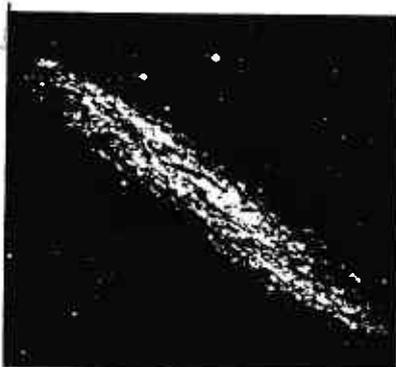
The night did not lend itself for serious planetary observation, as the seeing was quite bad. 'Seeing' is the term to describe atmospheric instability. Remember that when we observe the night sky it's like looking up from the bottom of a lake through the water. And in a way, our atmosphere is that lake.

As mentioned, the seeing was bad and no-one on the night could operate their telescope above, say, 200 times and discern any real detail on Jupiter or Saturn. Several members took out binoculars to locate some faint sky objects and Lou Timpano showed us how to locate a star cluster near Scorpius. 47 Tucanae was on show and full

marks to our newer members for locating it.

After a while, the cloud did take over and many called it an early night. At least some satisfaction arose with a reasonable nights viewing 'in the bag'. Eric and I stayed somewhat longer and a large opening appeared and encircled us overhead. I likened it to a large bald spot in the clouds. Through this spot Taurus, Orion and the Pleiades were clearly seen, and with Eric's assistance I located my first galaxy – NGC 253 in Sculptor.

It turned out a great night even if I did spend a few hours trying to use my polar axis scope to no avail.



NGC 253

(Photo by D Malin
Used with permission)

With great appreciation, the Society and I wish to thank Macarthur Anglican High School and especially Eric Brown for providing these star nights.

Noel Sharpe
(Vice President)

NEWS FLASH!!!!

Another Cobbity Star Night will be held on **Saturday the 21st November**.

Meet at the front gate of Macarthur Anglican High School, Cobbity Rd, Cobbity at 7.15pm sharp!

All members are welcome.

Bring your telescopes, binoculars, chairs, Aeroguard (repeat – Aeroguard, RID etc), coffee, warm clothing – or just yourself.

There will be plenty of scopes to look through and copious advice given.

Let's make it a big one to send the year out.

NEWS FLASH!!!

IT'S SNOWING COMETS

In the October issue of *Astronomy*, there is a fascinating article about Dr Louis Frank. He is a physicist from the University of Iowa, who is very seriously – so seriously that he is knowingly putting his whole scientific reputation at risk – arguing that the earth is constantly being bombarded by snowball comets as big as houses. At the incredible rate of *thousands per day*. The comets vaporise and fall to earth as clouds of rain up to 50km diameter. And he has the pictures to 'prove' it. Stay tune for more.

**WHAT'S TO SEE THIS
MONTH? ...AND THE NEXT
16TH NOV - 31ST DEC**

This is the last of these articles for the year. If you haven't before put any of these tips into practice, could I encourage you to do so this time. There is great pleasure and satisfaction in going out into the night, knowing what you expect to see... and seeing it!

Note: All times in this article are stated in Eastern Summer Time.

Mercury waxes and wanes between now and New Year, also changing from an evening twilight to a morning twilight object. Though it was at maximum elongation from the Sun on 11th November, it is still visible low in the sky just after sunset.

On 21st November it is about 8° from the Moon – wedged between Antares (in Scorpius) and the Moon. Mercury will be found directly above WSW about 45 minutes after sunset. You'll need a relatively clear western horizon though.

Afterward, Mercury disappears into the glow of the Sun until it reappears in the morning twilight about 10th December (about 4° to the south of the Moon) between the Moon and the head (or claws) of Scorpius.

It reaches its greatest elongation from the Sun on 20th December, then starts to

recede into the Sun's glow again.

Venus: the Goddess of Love is still playing hard-to-get in November and only just co-operating in late December. You'll have to be quick after sunset from about 20th December onwards before she dives for cover over the horizon again.

Mars is a morning object all November and December. For example, on 10th December, Mars rises at 2am so you have all morning till sunrise to study it. (Haha!)

Jupiter is still a sight to see anytime after sunset. It doesn't set from now till end of December anytime before midnight. It's still bright at mag -2.6 to -2.4.

Jupiter has stopped its retrograde motion (on 14th Nov.) and has resumed its normal west-to-east progress against the stars.

On Christmas day you'll get a latish present (of sorts) in the form of a close pass of Jupiter with the Moon. [0.15° from Sydney at 11.20pm]. Hey, you got your big chance on 4th October. You can't expect all your Christmases at once.

Saturn is also high in the sky all November and December all evening. In December, it's well placed directly overhead at about 9pm to 8pm. It makes a 4° pass at the Moon on 30th

November and another (not so close) pass of 8° on the 27th December.

Again, it's a good idea to get out there and see Saturn now, before it gets further away from us.

Saturn also turns its retrograde motion off on 31st December. West-to-east it goes again.

Aldabaran (The Eye of the Bull in Taurus) will be skirting the Moon on 3rd December about 11pm, but no-where near enough to call a 'near' occultation.

Meteor Shower – The Leonids. The big event this month is scheduled for 17th November – that's **tomorrow** folks. Either it'll be the big event of this 1/3rd century – or it won't. They are talking **15,000 per hour!** You won't know unless you get up early a.m. and have a look towards Leo, which will be almost due East.

If it happens, those who made the effort will be able to dazzle those who didn't with extravagant descriptions. Me? I'll be speechless!

And so ends the final 'What's To See...' for 1998. I hope these little jottings have helped and encouraged you. If not, please let me know and I'll go back to writing my novel.

Good Seeing

Bob Bee



THE FINAL SURRENDER

Fortunate am I to recline back in my new abode and by chance of position admire fine sunsets and westerly vistas.

The line of observation encompasses a deepness of colour, a richness and hue not sullied by man made light. It's engrossing and I'm at a loss to give a description, but try as I will.

It's more a feeling, an emotion. Is it blue, green, grey or black? What's presented is a merge of tincture that's blended between Heaven and Earth. For want of any betterment of wording, one will simply call it... twilight!

The television is in operation and the lampshade is on, but the dark silhouetting of cloud scattered slightly above the horizon is very intoxicating, as this is the 'final surrender' of day into night.

Starlight, star bright, is that Vega, Achenar or Sirius I see tonight? A consultation with the books of reference will reveal the technicalities, but on the other hand, a rose by any other name...

Strange to think and ponder that during the strong daylight hours, the never ending parade continues unabated. Then fury of our Sun suppress all that is to be seen, but by day's end a new parade is emerging and I am struck down with a feeling of humbleness absolute.

In conclusive analogy the cycle will repeat itself, for the same events occurred yesterday, today and for all our tomorrows. It will be a continuing of events with day turning into night and night into day. What sights to behold in the Final Surrender.

Noel Sharpe
From The Twilight Zone

MY TEAPOT RANNETH OVER

Further to Daniel's excellent account of the Cobbity Star Night (clouds and all), I'd like to share some of my observations.

It was quite impressive to see these ranks of telescopes all pointing to the heavens. All different shapes and sizes. Noel's was easy to see (and not trip over). It's all WHITE. Lou's 4" refractor is fascinating – and powerful. There were other scopes, all in full use, and... there were the binoculars. Never underestimate the usefulness of binoculars, particularly in a dark sky.

A case in point. That night, before the dreaded clouds moved in, a number of us were enjoying the spectacle of Scorpius and Saggitarius before they dropped over the horizon. M6 and 7, the Open Clusters at the end of Scorpius' tail showed up a treat in my 12x50 binoculars. I'll swear I can now see the Christmas Tree shape of M7 and the Butterfly in M6.

But then we switched to Saggitarius (The Teapot.) After checks of the star maps of which nebulae were where, we went hunting. I was absolutely chuffed that with my binocs, I was able to find the Lagoon Nebula. Of course, it looked nothing like the famous colour photos of the gassy nebula, but I could see sufficient characteristics of its elongated shape to assure myself I was looking at M8. (This was confirmed by others who first found it in their finder scopes and then their main optics.) What a collection of clusters and dark lanes. The gas (or part of it) was barely suggested by a faint glow between stars. Beautiful!

Then I moved to M22, the globular cluster. Gotcha! Too easy, but still very satisfying to observe and admire.

Then, way above the Teapot's lid, we found a plethora of clusters and nebulae. M17 (Omega Nebula) – a distinctive wedge shape in my binocs, and just near it M24, an extensive star field. And in the same view, M25, a nice scattered cluster. For those sightings alone, the night was worth it.

Bob Bee

Happy Christmas