



# PRIME FOCUS

Volume 5 Issue 4

May 2000

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## President's Report

Last month we held our Annual General Meeting and I must admit, compared to past endeavours, it was surprisingly well organised. I wish to thank Ian Cook for expertly handling the Returning Officer's duties and Ragbir Bhathal for being our guest speaker on the subject 'Aboriginal Astronomy', which was very informative.

I'm sure everyone will extend congratulations to all those elected to committee positions and of course I'm thrilled to bits at being elected the Society's second president.

For your information, the positions are as follows:

President: Noel Sharpe  
Vice-President: Daniel Ross  
Treasurer: John Koster  
Secretary: Phil Ainsworth  
Committee Members:  
John Rombi, Peter Drury,  
Bobbie Elston, Peter Elston.

At last month's meeting compliments and thankyou's were flying thick and fast and our AGM was the appropriate forum to do this. Having said that, it is acknowledged that Phillip Ainsworth departs as President to take up the position of Secretary in our club. His input will always be highly valued by not only myself but many others I'm sure.

Phillip Ainsworth has been at the helm of this enterprise for over four years and I'm positive that he will eagerly await M.A.S - The Next Generation !

## Membership Renewals

The payment of fees allows us to effectively plan our expenditure for the year ahead, with our AGM now being held later, i.e. April, than in previous years it may have escaped your attention that renewals were due from the 1<sup>st</sup> March. I wish to thank all those members who have paid so promptly and some 34 are now financial.

According to my "research" we may have about 17 existing members who are required to part with their "Hard Earned" and bring themselves up to date.

As in the past we have normally allowed 8 weeks in which to renew - i.e. 1/3 to 30/4, so please take note that our Society's financial year runs 1<sup>st</sup> March to 28<sup>th</sup> February each year and that we have our Annual General Meeting in April each year from now on. Membership renewals are due from the 1<sup>st</sup> March and as such we are now a little behind. **So please make your payments ASAP !!!**

## Help Needed

The University would like anyone with bricklaying or BBQ building experience to volunteer their services to create a masterpiece. No observatory would be complete without the great Aussie icon the "BBQ". Imagine partaking of social conversations whilst frying some onions or turning a snag,

then preparing for a night of observations.

Seriously, Ragbir Bhathal has asked for our assistance and having a BBQ on site would benefit the whole community. The bricks are available on site, however we are still working on the details. If you have had experience in building brick BBQs please see Daniel Ross (VP), Ragbir Bhathal or myself ASAP.

### Official Dates For Observing Nights

At last I can confirm when we will be out in the field. However, some locations are depending upon the availability of the Oakdale and Bargo farm sites. So sometimes switching between Bargo and Oakdale nights might be done between publishing the Journal. I will endeavour to print locations when definite.

|                             |           |
|-----------------------------|-----------|
| 27/5 Oakdale Farm           |           |
| 3/6 Oaks                    | 24/6 Oaks |
| 1/7 TBA                     | 8/7 Oaks  |
| 29/7 TBA                    | 5/8 Oaks  |
| 26/8 TBA                    | 2/9 Oaks  |
| 23/9 Oaks                   | 30/9 TBA  |
| 21/10 Oaks                  | 28/10 TBA |
| 18/11 Oaks                  | 25/11 TBA |
| 16/12 Oaks                  |           |
| 23/12 TBA (Merry Christmas) |           |
| 30/12 Oaks                  |           |

The location for the night 1<sup>st</sup> July will be available at the General Meeting on 19<sup>th</sup> June. Remember my mobile phone will be switched on to confirm details on the day.

In conclusion I wish to personally thank all those who voted for me and I wish you well in your astronomical pursuits.

Noel Sharpe



## SECTION LEADERS

The following are the coordinators of these special interests in particular fields

### DEEP SKY:

Pete & Bobbie Elston

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Daniel Ross (02 9790 5838)

### AMATEUR TELESCOPE

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### TELESCOPES :

NOVICE/INTERMEDIATE

Noel Sharpe

ADVANCED: Peter Druery.

### ASTROPHOTOGRAPHY:

NOVICE: Noel Sharpe

ADVANCED: Peter Druery

### PLANET ADVICE:

Phil Ainsworth

## A Trip Back in Time

How many times has this happened to you? You're in deep discussion with friends or work colleagues and your interest in astronomy comes up, your enthusiastic description of the objects you've seen is met with a yawn, or with the look that says, "I would rather watch paint drying."

Amaze one and all by telling them that on any clear night you are able to take them on a trip back in time. The only equipment that will be needed, is a comfortable chair, at least one eye and a pair of binoculars or a telescope.

Before you commence your trip a brief explanation on how far light travels in a year (this is known as a light year) or how far it travels in a second (300,000 km/s) is needed.

Strap yourself into the seat, take a firm hold on the person next to you, and let's go.

Our first stop is Alpha Centauri, the nearest Star to our solar system. The light that we are seeing today left there 4 years ago, about the time John Howard became our Prime Minister.

Our next stop is the brilliant star Procyon in Canis Minor. Twelve years has elapsed since the light we see now began its journey. In 1988 we were all celebrating Australia's Bicentennial, tall ships, parties and fireworks. Bob Hawke was our Prime Minister.

We now wing our way to the constellation Gemini and the star Pollux. Neil Armstrong and Buzz Aldrin were marking mankind's first foot steps on the Moon in July 1969.

Up till now we have been travelling at a moderate pace,

we will now increase our speed and travel even further back in time.

We have arrived at the constellation Leo. This is where the star Regulus lives; this is 1914 the beginning of the first World War, and also when an enterprising fellow by the name of Henry Ford founded his motor company.

We now hit warp speed and end at the well known open cluster in Scorpius, M6. The light has taken 2000 years to reach us. This was at the time of the birth of Jesus Christ.

Our next stop is the Eagle Nebula (M16) in Scutum. Its light takes you back 6,500 years to the dawn of modern civilization. If you think that the distances we have covered up till now have been great, we have two final leaps left.

The Large Magellanic Cloud is some 200,000 light years away. Humans were on Earth but no written records have been found.

Our final stop is the well known Great Spiral Galaxy, Andromeda (M31) its light left 2.2 MILLION YEARS AGO, and your guess is as good as mine as to what existed then on earth.

Even though we have covered great distances on our short journey, the remainder of "what is out there" is immeasurable and unimaginable.

John Rombi



### **Borrowing MacDob**

The Society's own telescope, a 6" Dobsonian, is available for loan to members. It is easy to transport, set up and use. If you would like to borrow MacDob for a month, speak to Phil Ainsworth who is its custodian. Though there is no hiring fee, members are invited to make a donation of their choice which will go towards the upkeep and upgrade of MacDob

### **An Exhibition by David Malin**

Here is an opportunity to experience an abundance of astronomical artistry – the works of David Malin, astro-photographer extraordinaire.

There will be the breathtaking images taken by Dr Malin with the 3.9m Anglo-Australian Telescope, presenting a view of the Universe like you will never see through your 8" or even a colour plate in a book.

The Exhibition will be held at the Campbelltown Art Gallery from 16<sup>th</sup> June to 23<sup>rd</sup> July.

Don't miss this opportunity to see astro-photography at its best.

### **Future Speakers**

Though dates have to be lined up, in the coming months, we will enjoy talks by:

**Dr Fred Watson** -  
Astronomer In Charge at  
AAO.

**Peter Elston** on "Why do galaxies look the way they do?"

**Bobbie Elston** on "Deep Sky Objects"

**Peter Elston** on "The Southern Sky Party".

### **LATEST NEWS**

#### **Shuttle Mission/ISS**

The shuttle STS 101 was supposed to launch April 24<sup>th</sup>, but has been delayed due to weather over in Florida. Its mission is to go where no man has gone before (not really). It is to bring up food and drink to the International Space Station for the first crew hopefully late this year when Russia gets its finances in order and sends up the vital component to make the station livable.

The space station is also being lifted 36 kms higher so it won't fall down and hit us down here on Earth. After another 6 shuttle flights by October (we hope) and the Russian launch, astronauts can go up there to live comfortably in zero G for months on end.

An interesting thing about this station is that it cost \$8 billion before one single part was made and constructed. For the remainder the budget has blown out to a whopping \$24 billion. Hopefully, when it finally gets up and running this white elephant can repay all its cost in new medical and scientific progress and that the whole thing isn't just a big waste of money.

I would like to propose that the space station be built at the Moon-Earth position of L5 where it cannot constantly be pulled into Earth's gravity, and while we are at it put a spin on it so people can live up there in gravity.

### **SETI**

SETI turned 40 years old last month, and no signal has been forthcoming yet !

### **MIR**

Two new cosmonauts from April 6<sup>th</sup>, occupy the old space station which is now mainly owned by a private company called MIRCORP. The new owners are hoping for a big commercial use for the aging space station. Possibly actors, wealthy businessmen could live in space for 4-5 weeks. The astronauts are repairing leaks and are expected back on Earth in 45 days.

### **Mars Space ships For 2000 and Beyond**

Space ships are still heading for the red planet with hopefully less budget cuts and fewer basic errors in the spacecraft and the signals in

the computer programming are sent in the right measurements. One such craft is The Mars Orbiter with its prime directive to look for ideal landing sites for a lander in 2003. The pathfinder crash with balloons is currently in favour for that lander.

### **Mars Sample Return**

If done properly, could cost up to \$3 billion (no cost cutting) to ensure a safe landing and lift off from Mars. Hopefully the ISS will be up and running to test the samples brought back, and to ensure safety that no micro-organisms could come to Earth and harm us.

### **Europa**

A new orbiter designed to settle the question once and for all on Europa's possible warm ocean under its icy surface. Also on the drawing board is a small lander. Currently the latest pictures show that sulphuric acid from a sub surface ocean is present.

### **The Mars Artic Research Station**

Is operational from late last month. This small habitat is totally self contained as would be on Mars. Experiments in the habitat are expected to show the world that men and women can live and exist on Mars and that a human mission should be shortly undertaken.

Phil Ainsworth ■

## **Secretary's Report**

I am happy to state as my first role of Secretary I have been busy mailing Prime Focus off to other societies, capturing new members, and learning to write a lot faster than any time in my life (the minutes at a committee meeting). Collecting all the mail, sorry to say missing a few stragglers with renewing.

I must say a sincere congratulations to all the committee members elected to their positions, and especially with surrendering my 'el presidente' role after 4 years at the helm. It couldn't have gone to a more deserving fellow, Noel Sharpe our ex VP. I wish him every success and enjoyment in being Grand Poohba of the Society. I wish to thank all those who voted for me as Secretary for the club. Lets have a great year in Astronomy 2000.

Phil Ainsworth ■

## **Gunfight at 'O' a 'K' Corral**

The word went out to the Gunslingers of the Wild South West that they should meet at the local saloon and eating emporium called HJ's. Their objective was clear, to fight and defeat the dreaded hombre "OVERCAST". The date was set April 29th 6:00pm.

After the standard meal of beans and whisky, they

mounted their trusty steeds packed heavily with their implements of battle. As they rode off into the sunset, their leader El Sharpo promised them victory and with that clear skies.

On their arrival at the "O" a "K" corral, the gunmen were confronted by the well fortified "OVERCAST". They unloaded their weapons and placed them at strategic positions around the corral. After a heated battle the dreaded "OVERCAST" retreated.

El Sharpo and his men now drunk with victory were rewarded with the spoils of combat: the Jewel Box, Omega Centauri, Eta Carinae, Great Nebula of Orion and the Great Galaxies of Leo & Virgo. This was truly a King's ransom.

After many hours of wild indulgence with their treasures, the unassuming heroes were once again overcome by the dastardly "OVERCAST" and his sidekick "Foggo the Thick". Unfortunately our heroes were outnumbered and outgunned. So if you ever take a trip out to the "O" a "K" corral you will see the headstones of the brave men that battled their powerful foe. They are in no particular order: El Sharpo, Lloyd the Luscious, Cookie, Kaldy the Kind, Dr Dick Holliday, Dangerous Dan, Paleface Pete, Pressman, Budgero and Rombero the Repulsive.

*PS*

*Joking aside, we all had a great time at The Oaks observing field, so if you haven't been to an observing night before, or it's been a long time since your last visit, I urge you to come as the company is always fun, and there's always a good laugh to be had.*

John Rombi

### Librarian's Report

Yes, finally I have made a start on the new cataloguing of all the materials for the society members. And you members, please feel free to borrow an item and write your name in the book and return it the following month thanks.

I have a small selection of materials here tonight, please peruse some of the collection.

### 'Mission To Mars' Review

Forget the critics, space nuts unite. I loved it ! The movie was visually brilliant, acting was fairly good and plot well, maybe a little thin. But who cares when it's about Mars.

Without spoiling the story line completely, it starts out with a small going away party for the astronauts that are going to Mars for the first ever manned landing. Well, they get into some difficulty and a rescue party come a few months later and try to find out what happened to the first mission.

After some thrilling space sequences they safely land on Mars and search for survivors. I am not going to spoil the end, except to say science fiction and those of us who hope for life on Mars won't be disappointed. I am hopefully going to see it again.

The other space movie I saw was 'Galaxy Quest'. I won't spoil it for those who haven't yet seen it, but it's a funny, movie with Tim Allen playing the part. I might let Bob review it for you as I know he is seeing it also.

John Ainsworth

### Jupiter And Its Moons

In reading an ABC book with a science fiction story "Escape From Jupiter" as it has been seen on ABC TV.

This story tells us from one of Jupiter's Moon Io, that there was a mining colony. Because of a volcanic eruption, the people of the colony have to flee with their children floating in orbit above them in an old space station and they are very lucky to make it into a useful spacecraft and make the journey back to Earth.

That is only a fantastic story, but it is true that there is volcanic activity on Io. Human beings would probably never be able to build a colony with caves and chambers on Io because a

volcanic eruption can occur any time.

We can make a fantastic story with Jupiter's Moon Europa. People can land there. They should have a space station floating above Europa like a colony. We think that there is water beneath the ice. After the colony is built people can drill through the ice-crust searching for water. We don't forget, there is sulphuric acid on Europa too, like shown in the latest news on the Internet. Hopefully we can find or make chemically plenty of water made from oxygen and hydrogen. In sulphuric acid only one cell-bacterias can live. So, let our fantasy go: We can make a pond of real water, if there is too much sulphuric acid in the sea underneath the ice, in one of the chambers of the colony. We put one-cell bacteria in this clear water and of course there is an atmosphere like on Earth above this pond. Now the one-cell bacterias can multiply, then the evolution starts. We have first little fishes in the pond, then bigger ones, then animals out of the water, dinosaurs. It goes pretty fast because scientists make experiments and feed the animals with hormones. Before we know it we have a Jurassic Park in the colony. You could make a horror story now. People have to flee from the colony into the floating space station and return to Earth.

Ursula Braatz. ■

## SOUTH PACIFIC STAR PARTY 2000

Well it's time to report on the South Pacific Star Party. As members in our Society know, Bobbie and I try to get to the Star Party at the ANSW's site every year. We also try to get up there some months as the Sky is great for deep sky observing. The ANSW's site is great which makes hosting the Star Party a success each year.

I went up early in the week on my own which made me the third person there and it stayed that way for a few days. I even managed to set up camp with a fire nearly as quick as with having Bobbie and the kids (sorry guys!)

The first night I spent going over all our deep sky objects as the sky was cloudy so this was a good chance to do some more planning. All up we had close to 300 objects we wanted to look at over the week. Unfortunately we only got through just over 100 galaxies. We looked at some galaxies we never had looked at through a 10" Dob and they were fantastic. Some of these objects I hope to go over at one of our field nights in the next few months. So that night I spent talking to Scott Mellish, an ANSW member who loves to draw the Galaxies he looks at. Scott draws lovely sketches of these galaxies.

By the weekend there was close to 300 - 400 people at the Star Party. On the Friday there was a talk from John Dobson's side walk followers who gave a great talk on how they educate people about astronomy on the side walk. Friday night there were some small talks of astronomical interest and many people were out on the observing field observing. Bob Roff was there with his 20" telescope and a few other well known amateurs.

Saturday came. It all looked fine, then the rain came. We should have had the burning of the telescope the night before. The Burning of the Telescope is usually done every Friday to appease the rain gods but it was decided to wait till Saturday. This was a bad mistake as it poured on Saturday and the rest of the week-end. Every year, Don Whiteman builds a make-believe scope which looks real and is burnt as the sacrificial offering. After this Mike Smith of the Binocular and Telescope Shop lets his rockets off which are quite spectacular. They rise to a few hundred feet, Mike lets the kids have a go as there are plenty of kids there. Then after that Bobbie and I fired our Orange Gun which was working perfectly as we were down shooting oranges about 200 yards earlier in the day into a farmer's paddock. Mmm he'll probably have a few orange trees soon.

The local scouts have hot food going 24 hours a day and they do a great trade over the star party.

The Saturday morning had a lot of stalls for display Saturday afternoon. A few people went up to Mudgee thinking no way it would rain. Well when they got back their telescopes had a few inches of water in them. Been there, done that!!

Dr Vince Ford gave a fantastic talk that afternoon. I would say the best that weekend. Dr Ford is one of the head astronomers from Siding Springs and does quite a commical talk, Very enjoyable listening to him.

Also that afternoon a few of us had our private ritual - a cocktail party under Scott Mellish's humpy. A lot of fun. The bar is an old ironing board. We even had a person come up to buy a carton of beers and we said sorry, this is not a bar that we sell beer from. He was disappointed. We have a name for our party. If anyone is interested I will whisper it in their ear.

It was great to see Loyd there and the Saturday night we invited Loyd around to our camp fire in the glen but the night turned bad weather-wise. Next year we hope to see some more members from MAS take the adventure. Another member also present was William Daws.

There were many people from interstate a good friend of mine Micheal Horn from Brisbane who does great astrophotography.

Bobbie and I again were beaten by the weather and did not succeed in getting our three Messier objects to make our 100. We are hopeful that during winter we will get back up to Ilford to use the latitude to get those Messier objects. Weather has plagued us for ages now.

It is a great weekend and ANSW puts on a great Star Party. See ya there next millenium.

Pete & Bobbie Elston. ■

### What's To See This Month: 15<sup>th</sup> May – 18<sup>th</sup> June

The Planets are a bit thin on the ground this month, all flitting about on the other side of the Sun, but there are a few opportunities:

**Mercury** comes close to Mars during evening twilight between 17<sup>th</sup> – 20 May. Very tricky to see, but they come closest (1.1°) on 19<sup>th</sup>. Slightly more viewable will be Mercury's approach (only 1°) to the M35 open cluster. Mercury reaches its greatest elongation from the Sun (24°) on 9<sup>th</sup> June.



M35 (The Open Cluster on the right)

**Jupiter & Saturn** are now 'morning' objects. They start the month moving into Taurus, where they stay for the remainder of the year. After being only 1.2° apart on 1<sup>st</sup> June, they start to move away for their 20 year divorce.

With the planets off the stage, now is the time to check out all the great winter constellations. Riding high this month are the great Scorpius and Sagittarius. I will be highlighting Sagittarius in next month's Prime Focus. Suffice to say it is loaded with Nebulae, Clusters and Globbs. Not to mention the centre of our Milky Way.

Also ideally located are Crux, Centaurus, Carina (with the delectable Eta Carina nebula), Hydra and Leo.

Then there is Virgo to the north, with at least 8 Messiers for you hunters, including the huge M87 elliptical galaxy, and M104, to which you have to raise your sombrero.



M104 – Sombrero Galaxy  
(Photo by D Mallin AAT)

### From the Editor's Desk

This has been an interesting month for a number of reasons:

**Firstly:** We survived the dreaded Grand Alignment. Despite doomsday prophecies about the effects of the combined gravitational and tidal forces of the five 'lined up' naked eye planets (which happened to be on the other side of the Sun at the time), there were no earthquakes, tsunamis, volcanoes. Nostrobobus's prediction of the bails falling off didn't even come true. Another victory for science and rationality, another raspberry for the 'new age' and astrology gurus.

**Secondly:** as hinted by Phil, I saw the movie *Galaxy Quest*. Yes, it's only entertainment, but we astronomers have to lighten up occasionally.

While I watched the mad-cap adventures of these has-been TV SciFi show actors (played by Tim Allen, Sigourney Weaver and Alan Rickman), caught up in the world of

SciFi Fan Club Conventions, I couldn't help think of William Shatner's famous (and recent) comment to a group of frenzied fans: "Get a life. It's only a TV show." But in the movie, it then becomes real life.

I won't spoil the movie for you by revealing the twists and outcome, except to say it is a rollicking ride, with lots of in-jokes for those who are fans of Star Trek et al, lots of great sight gags and superb special effects (worthy of any space Mega\$ movie). The Fermian aliens were delightful...I loved them.

I haven't laughed so much in ages. However, after seeing this movie, I will certainly think twice before saying "Beam me up, Scotty" again.

**Thirdly:** There was a great night of public astronomy education on the 6<sup>th</sup> May at the University. While the public (an estimated 400 people) enjoyed two excellent lectures on the Origin of the Universe, and the Search for Extra-Terrestrial Life, at least a dozen Society telescopes were set up in the large car park outside.

Following the lectures, the people swarmed out to view the stars through the army of scopes and also trek up to the domes to inspect the 16" telescope. As usual, there was a great range of public interest, from those who 'knew nothing' and just wanted to see the stars

through a telescope, to those who had a good basic knowledge of astronomy and wanted to reinforce it through our scopes.

To me (I was able to man MacDob), the best part is always the kids. They are so natural, so keen, and always awed by what they see. One little boy kept on coming back to see 'that globby thing.'

**Speaking of MacDob, I continue to be amazed at the quality of the image that comes from that 6" mirror. The Jewel Box was crystal clear, with the red supergiant at its centre; Omega Centauri was magnificent, with the outer stars resolved into distinctive 'fairy floss'. It even picked up M4 through the University lights. If you are a MAS member and don't have a scope of your own, you are depriving yourself of a marvellous experience if you don't put your hand up for a loan of MacDob.**

Noel has asked me to pass on his thanks to all those MAS members who gave their time and talents on that night. It was a big WIN for both the public and also the Society. In particular, he thanks Dave & Phil Macey for their manning of the Society stall and the running of the raffle. This extended to walking about in the dark car park looking for the people with the winning tickets.

Bob Bee