



PRIME FOCUS

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President's Report

Hello and welcome to tonight's meeting. We have four speakers to entertain you on a variety of subjects, with the highlight being Ragbir Bhathal's talk on Forty years of S.E.T.I.. You may recall last month that I surprised Ragbir with a Honorary Life Membership certificate. This was very well deserved and a recognition of the devotion he has put into not only our society, but also the wider astronomical community as well. Congratulations Ragbir.

Last month's speaker was Peter Williams, who gave us some insights into variable stars. It was a great talk and Peter's relaxed and casual style came over very well. Later Peter conveyed his impressions that our Society has the most enthusiastic membership he has ever seen, to which I duly concurred.

All I've been hearing lately is how great The Oaks observing night was on the 19th May. Great clear skies, transparent conditions, faint objects that were seen like never before, and YES, it was one of the only times that I wasn't able to attend. I am hoping that the same conditions will present themselves again.

The Public Observing Night on the 26th May, was sensational. Arriving later than expected I had to negotiate my way through a sea of people. Unfortunately, the perfect blue skies enjoyed throughout the day gave way to a cloud covered evening. We stopped counting at over 150 people. Just amazing.

The line to observe through the 16" telescope stretched past the smaller dome and an hours wait was to be expected. I received many favourable comments about our slide show and thanks again to

Samantha for speaking about Saturn.

Dick Everett kindly loaned us a loudspeaker with a radio microphone. It certainly put a boom into my voice. The unplanned interjections of Brahms and Mozart made for a lot of fun. I think some fine tuning may be required.

My thanks to everyone who made the night so successful. Whilst on the public nights, I've incorporated some of my own slides into the routine and they project well. Taking slide photography has given me an opportunity to improve my skill level and I can only say to our fellow astrophotographers keep going, don't give up when the going gets tough.

Fees!

Please note that if you have not paid your renewal fees by now you are deemed as a non financial member. If you wish

to continue with us, the joining fee will need to be paid as well.

I'm aware that several members are planning to purchase telescopes. The choice of instrument is a very important one. Questions like "What will the telescope do for me?" is a very apt one. I've had my telescope just over 2 years and only now am I using the declination settings. It's taken a long time to come to terms with the polar axis scope and I have recently reduced my alignment time from **2 hours, or not at all, to just 2 mins.** To put it simply, a telescope can be beyond your capability. What do you want it to do? Will you out grow the scope? It could be too big to handle by yourself or unable to be used for astrophotography, maybe you just want to pick it up and go outside. I don't know if this will help but it's wise to consider your longer term plans, transportation and setup times, focal lengths and what type of mount to place the telescope upon. If space allows in this short edition of Prime Focus you'll find a short article on Refractors, if not maybe...next month. Goodbye for now and good luck with your astronomy.

Regards, Noel Sharpe. ■

Vice President's Report

Like Noel this report will be short and sweet. First up the observatory night on the 26th May - the turn out was great and the sky, even though it was not totally clear, was better than last month. The Kidd-Sharpe (no it's not a local boxer) show was of the usual high standard and all the members that attended kept the public well entertained with all the amazing information they had to share. The addition of a mike and speaker improved the audience's ability to hear the orators, but it also brought with it the odd alien signal (Eat your heart out S.E.T.I.). The radio mike was tuned to the F.M. band at the range around 92 MHz. On a number of occasions the tuning would drift and Noel's voice would meld with the heavenly tunes of light classical music. I felt like Jodie Foster's character in Contact, having to tune and retune the radio to capture the signal as Noel's voice faded into the heavens, a small inconvenience that added to the fun of the evening.

Mars

Unless you've been living in a cave recently, you would be aware that Mars is at opposition this month, (last Thursday to be exact). Up to the time that this article has been written, I have observed Mars on a number of occasions. On most nights I have been fortunate to see quite a number of dark

elongated markings on the surface and the polar ice cap as a smudge of white, on 150x. Unfortunately no Martians waved back. Mars will continue to be a good telescopic sight for a least another month, so what are you waiting for? Get out there and see it for yourself.

John Rombi. ■

Refractors

High contrast Lunar and Planetary views are on offer in a good quality refractor. They are a sturdy instrument not prone to the optical alignment problems of other telescopes, ie collimation.

As a cautionary note, some 60mm refractors (that's the size of the objective lens) can be of questionable quality, especially if they are long focus ie, have long skinny tubes. The main problem with these is that the rack and pinion focus cannot accept larger barrel eyepieces (1 ¼ inch) and that's a big limitation. The best advice here is to ask an experienced member before making your purchase.

A big step up is the short tube 80mm (3.2") refractors, being short on focal length ie, f5 (lens size divided by appropriate tube length, 400 by 80 = f5) They give excellent bright low power wide field views, and are excellent for photography.

If your expenses allow, a 4" (102mm) refractor can be a superb working instrument. The short focus scopes are great, but expect some colour aberrations, ie purple and green fringing around very bright objects. Don't worry, this is quite normal unless you can afford a scope at over the **\$5,000 range (approx)** which use exotic glass lenses.

One draw back with short focal length scopes is that you need a ton of magnification to enhance the planets, but the trade off is great views of open clusters in which they can be framed nicely with the background stars at low power.

A longer focus 4" refractor at say f8 or above will give exceptional contrasty views of the planets. These designs apply more magnification for any given eyepiece than the shorter focal length versions.

In conclusion, the old adage applies ie it's not what you've got, it's how you use it.

Combine the above, with questions to someone who has one of these scopes and you will be well informed and I'm sure that the following members will be happy to assist you;

Lou Timpano 4" long focus Vixen.

Daniel Ross/Samantha Kidd 80mm short focus Orion.

Noel Sharpe 4" short focus.

John Rombi 60mm long focus Unitron.

Noel Sharpe. ■

Official M.A.S. Program

Key:

Oaks = Airfield (Members only)

GM = Monday General Meeting

OPN = Observatory Public Night

18 th June	GM
23 rd June	Oaks
30 th June	OPN
16 th July	GM
21 st July	Oaks
28 th July	OPN
18 th Aug	Oaks
20 th Aug	GM
25 th Aug	OPN
15 th Sep	Oaks
17 th Sep	GM
22 nd Sep	OPN
13 th Oct	OPN
15 th Oct	GM
20 th Oct	Oaks
10 th Nov	OPN
17 th Nov	Oaks
19 th Nov	GM
15 th Dec	Oaks

Borrowing MacDob

The Society's own telescope, a 6" Dobsonian, is available for loan to financial members. It is easy to transport, set up and use. If you would like to borrow MacDob for a month, speak to Bob Bee who is its custodian (at meetings or on 46251623.) 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.

Virgo – The Virgin

Virgo is preparing to disappear over the western horizon so why not check out its famous cluster of galaxies first.

Virgo is best known astronomically for this huge cluster of galaxies, known as the Virgo Cluster. It is about 45 million l.y. away and is contained within an area of approx. $12^{\circ} \times 10^{\circ}$ (if you overlook M104.) There are thought to be over 3,000 galaxies within the cluster, though most of these are too faint for amateur viewing.

Burnham lists 218 galaxies of 13th mag or brighter, most of which would require a good 200mm reflector to have a chance at viewing. Some of the brighter ones may be viewed by a 150mm reflector on a dark moonless night.

Where does one start? I suggest you start with a reputable chart which lists all 13th mag. or brighter galaxies. Burnham's Celestial Handbook, Vol 3, p2075 shows a good map of the central part of the cluster.

There are a number of Ms in the cluster for you Messier hunters. They are: M49, 58, 60, 61, 84, 85, 86, 87, 88, 89, 90, 98, 99, 100 and 104.

That's fifteen good reasons to check out Virgo.

Good Hunting ■

What's to See this Month? June 18 - July 15, 2001

Highlights

Venus next to the Moon this morning 18/6 at 8.30 am!!

20/6: *Saturn hooked on Moon*

24/6: Moon 4.5° from Beehive

30/6: Saturn 3° from Ald'bran

6/7 Part. Eclipse Moon 1 am 16/7:

Saturn/Venus 0.8° apart. Jup /

Merc 3.3° apart.

Trivia Answer

What was Mariner all about? Named like the 'ancient mariner' of poet John Keats, there were 10 Mariner flights between 1962 and 1975 aimed at exploring Mars or Venus. Three malfunctioned and two were destroyed after liftoff. Mariner 3 escaped and is still out there orbiting the Sun. M2 and 5 flew by Venus in '62 and '67; 4, 6 and 7 flew by Mars in '64 and '67. Mariner 9 orbited Mars in '71, and No 10 was the first flight to use a gravity assist from Venus to fly on to Mercury. There was a Mariner 11 but it was used in research for the Voyager flights. It is perhaps fitting that the Spirit of Mariner still travels in the Voyager Inter-stellar Mission to the far flung reaches of space.

Evening Planets

Mars has passed opposition on the 14th and is now at its brightest (-2.4 mag) and nearest to Earth with its largest size disk 20.8" until 2003. Only Venus and Jupiter will be larger in size. This is the closest Mars approach to Earth for the past 13 years. With good seeing, we will be able to see the north polar cap

and surface markings through even small telescopes. On the 1st July Mars will be just over 0.6° from M19 below Scorpius and moving in on his rival Antares. Compare the colours of these two red objects. One gets its red colour because it's on fire, and the other by reflecting sunlight off red soil. Which one is brighter to you? On 4 July Mars gets close to an almost full Moon, before standing still in its orbit and changing direction to head towards the east. The next 2 years are the best viewing of Mars until 2008

Uranus and Neptune are the only other visible planets in the evening sky this month. Rising in the east before 10pm both are still driving with the 'old sea goat' playing dodgem with the Moon on 10-11 June and July 7-9.

Morning Planets

Saturn, Mercury and Jupiter all rise just before the morning Sun in June around 5.30am onwards. The jewel was this morning (18th) when Venus was visible during daylight next to a thin crescent Moon from 8am to about midday. You missed it? No matter it will happen again on 18 July. Venus will be above and slightly left of the crescent moon looking north, about 3 hand spans west of the Sun.

Extreme care is needed when using binoculars anywhere near the Sun.

Same thing will happen with **Jupiter** on the 19th! Early morning 12/7 Venus, Saturn and Aldebaran will dance together, then 13-14/7 Jupiter and Mercury will pose with M35 in Gemini before the Sun gets up.

The **Moon** will be partially eclipsed between 11.30pm and 1.00am on the 5-6 July. A half shadow at maximum will be interesting to compare with last years event. Saturn will be poised on the horn of a crescent moon on the 20 June 45 mins before sunrise.

Trivia Question

No human eye had seen the Dark Side of the Moon before 1959. True or false?

Meteors

The **Delta Aquarids** peak on the 28th June with a maximum of 20 per hour. They are faint but if you look near Fomalhaut in Pisces Austrinus after mid-night you may see them.

Favourite Star choice this month is by Ned Pastor.

Antares is a red supergiant 400 times the diameter of the Sun. Its brightness varies from 0.9 to 1.8 but that's no bother to Ned, he likes it for the familiar feeling he gets when it rises, for its colour, and its position as the beating Red Heart of the Scorpion. Red Spot Special, it's up there now!

Good Seeing

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