



PRIME FOCUS

Volume 3 Issue 9

October 1998

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PRESIDENT'S REPORT

Welcome to yet another edition of our fabulous newsletter. It's been an exciting year with our guest speakers and star nights.

However, this year we have been unfortunate to hold these nights when cloud or rain diminished our view of the night sky.

I will summarise the year in full in next month's Journal of Prime Focus.

Coming Events: Some events coming up for interested Astronomy lovers:

Macquarie Open Night - 31st October. This night requires helpers with scopes so if you can come please ring me well and truly before the night and let me know. Also volunteers are needed to man the MAS table and promote

our Society. This event is a great fun night and even if raining, hundreds turn up from all over Sydney to be involved and participate in this huge Astronomical event.

Guest speaker for the night will be Dr. Dick Manchester of the Australian Telescope National Facility. He will lecture on the subject "*Pulsars -- Celestial Clocks.*" Talk starts at 7.45pm. Cost for the night is \$5.00 adults \$2.00 Children or \$15 for family. It's free for members if you come with a telescope or intention to help on the night. You can pick up a brochure at the meeting.



16th November Meeting - I am hoping for either Peter & Bobbie Elston or Jonathan Nally to be guest speaker(s).

December - no meeting but we have an exciting pool Christmas Party at my place. Some people have already indicated their intention to come by putting their name on the list on the Notice Board. It is BYO BBQ and drinks and swimmers.



18th January 1999 - MAS will have a meeting in January where we review the year and have a general chat about what we hope 1999 will be for us.

March is the Annual General Meeting-- Now is the time to start thinking of putting in your nomination if you wish to become a part of the committee or on the Executive. We will have forms at this and the next meeting for those interested.

The positions up for grabs are as follows:

1. President
2. Vice-President
3. Secretary
4. Treasurer
5. 3 committee members

Meeting Supper: My sincere thanks must go to Peter & Bobbie Elston for taking on the duties of Tea and Coffee people. Whilst not a difficult job, it can be tiring when one has other responsibilities. They have supplied new, proper drinking cups of very high standard. This adds a nice touch to drinking our beverages on these nights. Thanks again and keep up the good work. As from this October meeting, our supper is going up to 40c. This is a reasonable small increase to help cover the cost of supplying the makings.

Library: I have a list of items on the Notice Board of books and materials held at home. Please indicate on the form if you wish to borrow an item and I will bring it along the following meeting.

Prime Focus: Thanks to those who keep putting in interesting articles and all the hard work put in by everyone associated with Prime Focus. Regarding the Astro Quiz, I will have the answers for it in next months bumper Journal issue. The ninth planet question is meant to be what current planet is furthest out from the Sun.

Latest News

John Glenn lifts off this month in the shuttle, he will become the oldest man ever to lift off and live in space.

Apollo 17

December 7, 1972 saw the last Saturn V blast off successfully toward the Moon. The rocket had Astronauts Eugene Cernan, Ronald E. Evans and Geologist Harrison H. Schmitt. This final mission was the longest and most productive of all, with EVA time and most data and samples collected.

The Apollo missions were extremely successful.

Evans was the Command Module Pilot and whilst orbiting the Moon waiting for his colleagues to come back and reunite with him, he busied himself by performing many experiments and taking lots of photographs. The most significant aspect of this Apollo 17 mission was that it sent up a scientist H. Schmitt, to study first hand the rocks and geological land formations. With the aid of Cernan, he collected 110 kgs of rock and soil samples from the Taurus-Littrow Valley. They were on the Moon for 75 hours with 22 of them exploring the surface. Schmitt was also the last scientist on the Moon for unfortunately the Apollo missions were cut back from 20 to 17, and this

was to be the final mission to the Moon for some time to come.

After blasting off from the Moon successfully, the crew splashed down safely on 7th December.

The Apollo missions were extremely successful. However, despite the 6 space craft and 12 Astronauts walking on the surface of the Moon, no indigenous life was detected. However, it was found out the Moon has quite a thick crust as does the Earth and it also was found to have a mantle and a core of possibly Iron Sulfide.

Apollo 17 confirmed that no life could exist as there is no water and only a miniscule (near-vacuum) atmosphere that could never have supported life of any kind.

Now with NASA having found copious amounts of H₂O via the space probes Clementine and Lunar Prospector, it has sparked a theory, that maybe if life was never present on the Moon, then humans can become the first colonists and set up bases at the poles. It is hoped that by 2020, Man will have a Lunar base. It would be great to see this during my lifetime.

Phil Ainsworth (President)



**FROM THE EDITOR'S
DESK**

How many of you enjoyed the occultation of Jupiter on Sunday 4th October? Not the whoosy one on the TV News but the real one in the sky.

For once, I made a special effort to observe one of these rare events, and was it ever worth it. I kept my eye on the time on Sunday afternoon and around 5.35pm went out onto the front balcony. The Moon was higher in the sky than I had expected.

With my 12x50 binoculars, I got a glorious view of the full moon, and there just below it was the faint disc of Jupiter. (Remember, it was still daylight.)

As the minutes ticked by, Jupiter moved closer and closer. I steadied the binoculars against a wall to stop Jupiter from shaking. Then at 5.39pm, as I watched, Jupiter's disc merged with the Moon's stark lower horizon, and like an ocean sunset, it was going... going... gone!

Thankfully, we had planned a late dinner that night, so around 6.30pm, I suddenly decided to put MacDob onto the job. A quick setup on the balcony and by 6.37pm I was all set. (Try that with your SCT or Equatorial.)

With the 25mm eyepiece, giving a magnification of x50. The Moon all but filled the

field of view. But it was upside down now, so I had to watch the 'bottom' of the Moon where Jupiter was expected to reappear.

At 6.39pm, Bingo! It was like watching a bad case of acne in fast forward. The smooth edge of the Moon developed a faint bulge, then a bigger bulge, and within half a minute, there was this 'pea' attached to a 'rock melon'. A 'pea' with stripes which happened to be vertical to the Moon's edge.

Suddenly, it detached and floated free. Within another minute or two, I could see three of Jupiter's moons, also vertical to the Moon's edge. A rough sketch of what I saw is shown below.

I was pleased to have been able to share this viewing treat with my family, all of whom thought it was pretty 'cool.' So that's what you get all excited about, they said.

Good one, Jupiter.

Bob Bee ■



CORRECTION!

Hands up those who spotted the typo (or was it a Freudian Slip?) in the Prime Focus last month.

Under 'SETI Volunteers Wanted' in the President's report, we inadvertently said "Shortly the Society will be getting the 16" Meade..." We wish! This should have said "Shortly the University will..." Still, you can't blame us for trying. Apologies from the Editor. Sorry, UWS, but please keep us in mind.

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).

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

WHAT'S TO SEE THIS MONTH?

(19th Oct – 16th Nov)

Mercury is back and visible just after sunset. On 20th Oct it sets at 7.30 pm, getting later until 14th Nov when it sets about 8.30 pm, then it starts setting earlier again.

In early Nov, Mercury is moving up through Scorpius, approaching the red giant Antares. On 9th Nov, they'll only be 2° apart – worth a look. This month will be your last evening view of Mercury till the new year.

Venus – a no-no this month.

Mars is only one for the Areophiles like Phil A this month. ie It rises late in the morning (about 3 am). Still, if you want to get up that early, there are a couple of nice alignments worth a look.

On 22nd Oct, Mars passes within 2° of the galaxies M95 and M96 in Leo. And on 14th Nov, it is only 1.2° away from the crescent moon.

Jupiter. Well, it had its 60 minutes of fame on 4th Oct. But it's still up there, high, big and bright and a delight to study in a small telescope (or even a larger one).

It's about mag -2.7 (bright) and the moons are dancing a wild tango. It's up there all night (sets about 2 am) so pick your time.

The 'moon dance' continues with all four Galilean moons

on the same side of Jupiter on these dates: 27th Oct (East); 30th Oct (West); 5th/6th Nov (West) and 10th Nov (East). These can be easily picked with binoculars, so why not go out on one of these nights and see. Don't take my word for it.

Saturn: This is a great month for viewing Saturn. In fact, Jupiter and Saturn are a double act, both up and viewable at the same time (after Saturn rises).

Saturn rises about 6.30 pm on 19th Oct and gets earlier for the rest of the month. Ergo, it is higher for viewing each subsequent night.

It's mag -0.2, with a yellowish tinge, about 45° to the east of Jupiter. The rings are at a maximum tilt to us so the viewing is super. Even through binoculars, though you can't see the rings as such, Saturn has a definite oval appearance caused by the jug-ear rings.

Saturn is at opposition on 24th Oct, approx. 1.2 billion km away (gee, that close?)

It has a close encounter with the Moon, nothing as spectacular as Jupiter's but still worth a look. On 3rd Nov it will be just 1.6° from the full moon at about 8 pm.

So, if you have a scope, test your optics on the rings. This is your big chance with the rings in such an open position.

Meteor Showers:

I mentioned the **Orionids** last issue and they are still a goer. In fact their maximum activity is expected on 21st Oct. This

is a prominent display with rates up to 25 per hour. They are usually seen in the late evening till dawn.

The Leonids (they radiate from Leo, the Lion's head). This one has no guarantees it will happen, but a storm of exciting intensity may happen this year. (It does so every 33 years). Even so, the normal yearly shower from 14th to 21st November yields meteors from 10 to 20 per hour.

If you want to risk a loss of sleep to see the super storm, try the 17th Nov. If it happens, you'll be glad you made the effort.

Constellations:

Scorpius is setting earlier now, and you know what that means? Yes, Orion is rising earlier (if you can call 10pm early).

It's good to see our dagger swaggering friend back. Out with your scopes, all you Great Nebula hunters. (I think there's a pun there).

And of course, that means Taurus and Pleiades are up there too.

So, out with your star wheels, check what's coming up... and going down. Best make the most of Scorpius and Sagittarius while they're still visible this month. By mid-November, they'll be long gone over the horizon.

Good seeing

Bob Bee

