



COFFS HARBOUR ASTRONOMICAL SOCIETY INCORPORATED

MINUTES AND NOTICE OF MEETING

MINUTES OF JUNE 2013 MONTHLY MEETING HELD AT BOAMBEE HALL, MONDAY 3 JUNE 2013 AT 7:00pm.

PRESENT: 12 members and 1 visitor.

MEETING OPENED: 7:03pm with President, Win Howard in the chair.

APOLOGIES: Peter Black, Gerjo van Rhijn

MINUTES OF LAST MEETING: adopted as circulated by e-mail.

BUSINESS ARISING FROM MINUTES: Nil

CORRESPONDENCE:

IN:

- (1) From Peter Black: apology for not attend June meeting.
- (2) From Duncan Waldron: May be able to attend our July meeting.
- (3) From Max Laroux: Six suggested changes to future meetings.

OUT: Nil

GENERAL BUSINESS:

- 1) From Treasurer in absentia : Members are reminded that membership fees are due next month.
- 2) From Treasurer in absentia: Question: Do we set membership fees for next year at this meeting?
- 3) Moved Terry Gill, seconded Ian Veness that membership fees for the next membership year remain the same as they were this year. Carried.

**Annual adult subscription is \$16 while minors (under 18) attract a fee of \$8.
There is provision for a pro-rata system for a person who joins during the course
of the year. This is taken to the nearest quarter.**

THE TOPIC: “BASICS OF THE SUN”

Informal discussion proceeded for approximately 25 minutes on many aspects of the sun. Basic information regarding its size, distance away, rotation, etc. was covered as were some other topics such as its effects on us with things like skin cancer.

TOPIC FOR NEXT MEETING: “COMETS, ASTEROIDS AND METEORS”

suggested by Camilla.

REPORTS FROM MEMBERS:

From Terry Gill: Terry had a good look at the second half of the partial solar eclipse on 10 May. This was the first time Terry had used the solar filter on his 8” scope and the results were very good. He attempted to time the final contact and was confident of a result with an accuracy of ± 5 sec. The main source of error was the indistinct surface of the sun.

REPORTS FROM THE PRESIDENT: (this material is collected from the internet each month and presented in an edited form).

1. On 31 May one of the largest known near-earth-asteroids missed earth by a mere 5.8 million kilometres. The asteroid is named 1998 QE2 and has a diameter of about 2.7km. The orbit of this asteroid is well known and it will not get this close to us again for at least 200 years.
2. An instrument on Curiosity rover on Mars has measured a radiation amount of 0.66 sievert over the period of 253 earth days that it took to cruise to Mars. It is estimated that if a human received a dose of 1 sievert then that person would have a 5.5% increased risk of contracting a fatal cancer. 0.66 sievert is about the same dose as living on earth for 180 years.
3. The Uppsala telescope at Siding Springs near Coonabarabran has detected its 100th comet. This makes it the third most successful comet discovery scope in history (ground based). It is also the only telescope in the southern hemisphere surveying the sky for near-earth objects that may impact us. Unfortunately funding for its work is in doubt and it is likely that this work may cease in the near future.
4. New research about Neptune indicates that while it has the strongest winds in the solar system, the weather-layer on the planet is quite thin. More details on this fascinating place at <http://www.abc.net.au/science/articles/2013/05/16/3759940.htm> .
5. Traditional thinking has most asteroids based in the asteroid belt between Mars and Jupiter. Likewise comets usually are based well outside the orbit of Neptune. Astronomers have found a group of comets that come from the asteroid belt. These are called ABC's (asteroidal belt comets). So far a group of eleven have been identified. Read more at <http://www.abc.net.au/science/articles/2013/05/21/3761473.htm> .
6. Recent experimental results, based on earthquake data from the last 50 years indicate that the inner core of the earth does not spin at a constant rate. These results are from a five person team at the Australian National University. The spin

of the core has dramatic effects on many things including the earth's magnetic field. More detail at <http://www.canberratimes.com.au/technology/sci-tech/cheer-up-even-earth-gets-into-an-erratic-spin-20130513-2jkr.html> from the Canberra Times newspaper.

7. A new study suggests that the water on the moon and the earth came from the same original source. It is believed that the moon was formed from a massive impact with earth. This means that much of the moon came from the earth. So far so good. The impact was believed to have completely melted the material that formed the moon so water would have gone. The presence of this water suggests that the moon may not have completely melted. More at <http://www.abc.net.au/science/articles/2013/05/10/3754825.htm> .
8. For many years astronomers who study the moon with telescopes have been reporting seeing occasional bright flashes, much like explosions on the moon's surface. This is believed to be meteor impacts. The moon has no atmosphere to burn up meteors so they would crash into the surface unimpeded. For the last eight years NASA have been monitoring the moon looking for these flashes and they have found that they are a lot more common than previously thought. They have detected many hundreds each year. One particularly large flash was recorded on 17 March this year. It is estimated that the impacting meteor was about 400mm diameter and weighed about 40kg. The same night the earth was hit with a large number of very bright shooting stars, indicating that the same meteor shower hit both the earth and the moon.
9. A new dish has been installed at the Tidbinbilla deep space research station near Canberra. This was funded by NASA and has the main job of communicating with satellites, both receiving and transmitting data. It is a 35m dish and cost about \$US55million. It will be online next year.

CLOSURE AND FUTURE MEETING TIMES:

The next monthly meeting will be Monday 1 July, again at Boambee Hall at 7:00pm, all members and interested persons are encouraged to attend.

Meeting closed at 8:45pm.

VIEWING

The sky was not inviting at all before the meeting but it cleared up while we were talking and a good night observing was had by those who stayed. We concentrated on naked-eye observing and looked at a number of objects and constellations. We revisited methods of finding south from the Southern Cross and spoke again of the removal of the stars in Libra from the Scorpion many years ago.

Scorpio and Sagittarius were observed and the group were divided about whether Sagittarius is an archer or a teapot. Most could see both possibilities.

While we were looking at the Southern Cross we were rewarded with a very nice shooting star that appeared near the cross and headed rapidly down to the south-eastern

horizon. As is usually the case about half the group had glanced away and missed this sight. Many who saw it described it as the highlight of the observation session.

Terry GILL
Secretary

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PS: Aisling kindly sent the following for our information. Even though it was not part of the meeting I decided to include it in this month's distribution as another month delay would lessen the value of the info.

Hi Terry,

I thought some members might be interested in this.

Aisling

Physics events for the general public, students and teachers

British particle physicist, author, TV presenter and ex-rock star Prof Brian Cox is touring Australia in August with [An evening of scientific phenomena](#)

Brian Cox will be on stage with the ABC's Adam Spencer at the following dates and places:

- Saturday 10 August – Riverside Theatre, Perth
- Wednesday 14 August – Hamer Hall, Melbourne
- Friday 16 August – Capitol Theatre, Sydney
- Saturday 17 August – Royal Theatre, Canberra
- Tuesday 20 August – Concert Hall, Brisbane

Tickets go on sale 3 June (4 June for Perth show), and are likely to sell out fast.