COFFS HARBOUR ASTRONOMICAL SOCIETY INCORPORATED

MINUTES AND NOTICE OF MEETING

MINUTES OF MONTHLY MEETING HELD AT BOAMBEE HALL, MONDAY 3 SEPTEMBER 2012 AT 7:00pm.

PRESENT: 10 members and 1 visitor.

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

APOLOGIES: Peter Black

MINUTES OF LAST MEETING: adopted as circulated by e-mail with one amendment as follows:

That the motion : "*That the Treasurer's and Auditor's reports be adopted as circulated by email prior to the 2012 AGM." (*which was duly moved, seconded and carried at the AGM and then inadvertently left out of the AGM minutes) be included. Carried.

BUSINESS ARISING FROM MINUTES: ***Nil, other than above.***

CORRESPONDENCE:

IN: Nil

OUT: To Peter Black, thanking him for his generous donations to the society over the last few years and wishing him good health.

GENERAL BUSINESS:

Nil

REPORTS FROM MEMBERS:

1) From Terry Gill:

a) Finally got to have a look through his telescope last Saturday, 1 September and had a brief look before the moon rose. Observed Mars, Saturn, Omega Centauri, Alpha Crux, Alberio and the ring nebula.
b) Terry has observed three separate Iridium flares since the last meeting. One was at a group outing of about 20 people and another was tonight, shortly before this meeting, at 18:27:13 hours. Members were reminded about Heavens-above site which allows these to be predicted. The site is http://www.heavens-above.com/ and you then need to put in your location to get predictions of Iridium flares and other things.
c) Two nights in a row Terry observed the Hubble Space Telescope passing overhead, again thanks to the heavens-above site.

2) From Brett Connolly: Brett has been closely following the progress of the Mars Curiosity probe in the media.
3) From Win Howard: Advised that at 3:30am today the star Algol was undergoing an eclipse by its companion. Win followed with an informative talk on that particular double star and eclipsing binary star systems in general.

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

1. Curiosity has had a very successful landing on Mars. Initially there was very little data returned to earth, but what did come through indicated that the entry, descent and landing went very well. Timings were within 10 seconds of predictions and the final landing spot was only 2.4km from the intended site.
2. Further on Curiosity: one of the first things to happen was a digital brain transplant to convert the computers from flight mode to surface mode. This happened over about four days and appears to have gone very well. Following this some still images and video footage has been transmitted.
3. The month of August had a "Blue Moon" under one of the commonly used definitions. The most popular definition of a blue moon is the second full moon in any calendar month. Such moons do not appear blue in colour as a result of this of course. There can be events that do actually make the moon appear blue in colour. Two well-documented cases of this are the Krakatoa volcanic eruption in 1883 and the 1951 forest fires in Canada. The particles in the atmosphere made the moon appear blue after both these events. After Krakatoa there were blue moons all around the earth for about two years.
4. The James Webb space telescope is still on track for a 2018 launch. One of the milestones has just been completed with the 18 primary mirror segments ready for delivery.
5. Evidence of dark matter near the sun has been found. Read more on this at http://www.ras.org.uk/news-and-press/219-news-2012/2160-plenty-of-dark-matter-near-the-sun .
6. Re; "Monster Stars". There are four stars in the Large Magellanic Cloud which are estimated at over 300 times as massive as our sun. Latest thought is that these probably got this large by the merging of lighter stars which were in very tight binary doubles. Lots more detail at http://www.astronomy.com/News-

Observing/News/2012/08/Astronomers%20crack%20mystery%20of%20the%20monster%20stars.aspx .

7. Astronomers have detected what they describe as the "Cry of a dying star". This "cry" is really an x-ray signal from a galaxy 3.9 billion light years away. It is believed that this signal is from matter torn apart as it crosses the event horizon of a black hole. Read more about this concept at http://www.abc.net.au/news/2012-08-03/cries-of-a-dying-star/4175688 .
8. One of the basic concepts in astronomy involves the assumption that all type 1a supernovae have the same brightness. This is often referred to as the standard candle and is used in many calculations. An example of a type 1a supernova that is not of this standard brightness has been found. If this proves to be verified then it could call into question many common beliefs, including the Nobel Prize winning research that "proved" the universe was expanding at an increasing rate. One of the many reports of this is at http://www.ia.ucsb.edu/pa/display.aspx?pkey=2810 .
9. A new class of galaxy has been found which is very bright in the infrared but not visible. Perhaps this is due to dust which absorbs the light. These have been fund as a result of data from the WISE (Wide-field Infrared Survey Explorer) mission. These galaxies are very "hot" at some frequencies and almost invisible at others. They are being called "hot Dust Obscured Galaxies", shortened to hotDOGs.
10. It is now widely accepted that the Higgs boson has been found. One thing that is still to be detected is a gravity wave. There was a report some time ago that they may have been found as a result of observing radio signals from a system with a pulsar and a neutron star. Last year the same sort of signals was detected in light from a pair of eclipsing white dwarf stars. This is a very close pair, eclipsing each other every six minutes and making a complete orbit in less than 13 minutes. More details at http://www.astronomy.com/~/link.aspx?_id=972d32b4-4846-49eb-a4df-663e3c1406b8 .
11. Research using the Atacama Large Millimeter Array (ALMA) has found molecules of a form of sugar in the gas around a star. The star is called IRAS 16293-2422 for those wishing to research this further.
12. Star Wars fans would be familiar with the concept of planets orbiting a double star system. Such a system has been found. It has a double star system in which one is much smaller than the other and there are at least two planets orbiting the double system. The system is called Kepler-47 and is about 5000 light years away in Cygnus. More details at http://www.nasa.gov/mission_pages/kepler/news/kepler-47.html .

CLOSURE AND FUTURE MEETING TIMES:

Brett and Jacquie Connolly said farewell to the Society. This is their last meeting before leaving us. Both have had positions on the executive for a number of years and will be greatly missed. We wish them well in their travels.

Roy Derrett asked an interesting question that instigated discussion for some minutes. He asked if you would be able to hear Curiosity moving if you were on Mars with it. What a great question and so different to most questions on astronomy.

The next monthly meeting will be Monday 1 October 2012, again at Boambee Hall at 7:00pm, all members and interested persons are encouraged to attend.

Meeting closed at 8:19pm.

VIEWING
The sky was clear of cloud but the moon was quite bright, restricting our viewing to brighter objects and constellations. The night was reasonably warm and those who stayed had an enjoyable look around the heavens.

Terry GILL
Secretary