at The Black Hole Society Turns One!

The ANU Black Hole Society has come a long way since its humble beginnings on Market Day of ’07. We have organised many social and academic events related to the promotion and awareness of astronomy. Here’s a summary of our many firsts for that year:

⚽ Public guest lecture series
First up, we had Dr. Charley Lineweaver giving us his insights into black holes in *The Most Legitimate Weirdness Known: A Tribute to Black Holes*. We also had Dr. Paul Francis talking about *Weird and Mysterious New Planets*, Prof. Brian Schmidt on *The Universe from Beginning to End*, Prof. Ken Freeman on *Dark Matter in Galaxies*, and Dr. Craig Savage on *Time Travel: Is it Possible?* Many a cake was baked and eaten; many a mind was mystified, and hopefully many went away entertained, enlightened and a little bit inspired.

✈ Trivia night
After long hours of organisation, the first annual BHS Trivia Night went off without a hiccup. The night began well, with the lucky door prize going to Mrs. Lisa Rorke. It quickly turned mental, as a dozen teams of highly caffeinated grad, undergrads, staff and some family members turned on each other in a battle of trivial proportions. The intermission saw Leanne Mickelthwait winning a signed copy of Steve Massey's book, *Exploring the Moon*, before the fray continued. Finally, after every neuron had given up in exhaustion, the third year undergrad team *Foiled Again* came away with the win, demonstrating that the wearing of tin foil helmets (and assorted paraphernalia) does indeed improve mental performance.

🚗 Physics, Psychology and BHS society ball
A small, brave band of BHS members arrived fully masked for the joint society ball held at the Rydges Hotel. After enjoying a two course dinner (steak and chocolate dessert if you were lucky), psychologists, physicists and astrophysicists partied the night away on the dance floor to the tunes of the Hancock Basement band. To all contrary expectations (or perhaps contrary to all) some actually provided experimental evidence that scientists can dance. Others did not. Most people got into the theme of the Masquerade Ball turning up with some very
elaborate masks, with one person in full costume.

**An observing night**
One of the many frustrations associated with observational astronomy is that we are at the mercy of the weather. As such, we were only able to hold one observing night in our first year which was thankfully cloud free. Equipped with spare scarves and jackets (luckily for the girl who underestimated the chill factor atop Mount Stromlo), torches with red cellophane attached (to preserve our dark sky adapted eyes), as well as telescopes, we observed many of the usual winter suspects, including the Jewel Box open cluster in the Southern Cross, Omega Centauri globular cluster in Centaurus, Carina nebula in Carina, M6 and M7 open clusters in Scorpius, and Jupiter and its tiny moons.

**BBQs, Movie Nights, AGM**
In addition to these events, we had plenty of movie nights and BBQs, and countless committee meetings! The year closed with the AGM and the election of this year’s committee members. The year 2007 provided a wealth of ideas and experience for the BHS and a solid foundation for 2008.

Thank you to everyone for all their continued support. To anyone who has ever helped move a BBQ (or cleaned it!), cooked a sausage (or burnt it...), baked a cake (and ate it too), we thank you also. And to our members, without you, the society could not have grown to what it is today.

**2008 Public Lecture Series: Charley's Talk**
After billions of years of evolution, it was clear that *loxodonta africana* had surpassed all other life forms, becoming the highest branch of the tree of life. No, it could not run as fast as a cheetah, nor fly like an albatross, nor even confabulate like those bi-ambulating humans. But without a doubt, its nose, the longest nose in the animal kingdom, made the African elephant the most advanced life-form in the universe.

If such an odd view of the hierarchy of life gives you pause, then so too should the parochial assumption that the size of our brains awards us humans the accolade of "most advanced life-form". In the first BHS public lecture of 2008, Dr. Charley Lineweaver challenged how we think about life and our place in
it. His talk, entitled *Should we Expect Extraterrestrials to be as Stupid as we Are*, was broadly appealing, provocative and highly entertaining.

His argument was twofold: that we shouldn’t be too quick in placing ourselves at the top of the tree of life, and furthermore that we don’t even understand what life is, with our current definitions being far too limiting. He put the case that human-like intelligence is the result of a serendipitous ecological niche. Like the elephant’s long trunk or the cheetah’s speed, such features are not at all inevitable outcomes of evolution. He also argued that the esteemed title of being alive should be extended beyond those things with DNA, to viruses and even some physical systems far from thermal equilibrium; essentially, to any process which relies on a steep energy gradient and feeds off what in thermodynamics is called, ‘entropy’.

Some were unconvinced, others were intrigued, and others still were converted. But there is little doubt that all left the lecture well fed and entertained.

**First two observing nights for 2008**

A gorgeous sunset, with not a cloud in sight, began the first BHS observing night for 2008. The night was pleasantly warmer than expected for the start of the autumn season. We had three telescopes in use including a white 6 inch dobsonian, an orange C8 telescope, (both Public Outreach telescopes owned by Mount Stromlo) and a white 10 inch Meade Schmidt-Newtonian (owned by club president, Silvie). As members began to settle in on the mountaintop, the appearance of the International Space Station began its streak across the southern part of the sky. We all watched, fascinated, when at approximately 8:24 pm, the ISS appeared from somewhere near the south celestial pole and headed towards the Southern Cross. At an approximate apparent magnitude of -1.5, the ISS was clearly the brightest object in the sky (the brightest star in our night sky is Sirius, with an apparent magnitude of -1.47). Saturn was by far the best crowd pleaser telescopically, with its majestic rings and tiny moons. Its rings have begun aligning themselves edge on, and will soon be invisible due to the alignment between Earth and Saturn. We also viewed the Eta Carinae nebula, Mars, the Jewel Cluster, Orion’s nebula and the Pleiades.
The Committee

The Black Hole Society committee is formed by a small number of ANU students, all of whom have a passion for astronomy. Meet the 2008 committee:

President
Silvie Ngo
3rd year, Engineering/Science

Vice President
Kirill Talanine
3rd year Physics, PhB

Treasurer
Dion Hawkins
3rd year, Science/Law

Secretary
Vanessa Nimmo
3rd year, Music

IT/Webmaster
Daniel Sultmann
2nd year Physics, Science

Events Coordinator
Alec Yu
3rd year Maths

Public Relations
Shern Ren Tee
2nd year Physics, PhB

Graphic Artist
Loren Chorley
Graduate, Bachelor of Science
(Physics, Maths)

On our second observing night we were welcomed with a winter chill. Despite the cold, many braved a look through the telescopes and even had a chance to operate the 6 inch dobsonian on their own. The ancient Farnham telescope was also in use, displaying crisp views of Saturn and the Alpha Centauri triple star system (of which only two are actually visible through amateur telescopes). Other highlights include viewing the Tarantula nebula in the Large Magellenic Cloud, the radio galaxy Centaurus A in the Centaurus constellation, Mars, and our usual favourites, Omega Centauri, the Jewel Cluster and the Carina nebula. Special thanks to BHS member Kingsley for providing us with hot tea and coffee – a great way to end a cold night of observing.

The Tarantula Nebula in the LMC. (Source: APOD).

Wandering through the Southern Skies

Eta Aquariids Meteor Shower

Overhead on May 4th, 5th and 6th the Eta Aquariids will be showering us with meteors as the Earth’s orbit takes us through the remains of Halley’s Comet.

Meteors showers are the result of debris leftover from comets as they pass by the sun. When the earth’s orbit intersects one of these debris piles, the particles can graze or enter the earth’s atmosphere, creating a shower of what are also known...
Upcoming Events

BBQ
When: Thursday 1st May
12:30 pm to 2:00 pm
Where: Union Court, ANU.
FREE for members.

Public Lectures
Dr. Christine Charles from the Research School of Physical Sciences and Engineering will be giving a talk on Plasmas Pave the Path to Planets: From Aurorae to Mars.
When: Thursday 1st May
6:30 pm to 7:30 pm.
Where: Manning Clarke Centre, Lecture Theatre 2, ANU.
Refreshments at 6:15 pm.

Prof. Harvey Butcher, newly appointed director of the Research School of Astronomy and Astrophysics, will be giving a talk titled An Optical Astronomer Designs a Radio Telescope: The LOFAR Story.
When: Thursday 8th May
5:30 pm to 6:30 pm.
Where: Copland Lecture Theatre T, ANU.
Refreshments at 5:15 pm.

Parkes Trip June 28th to June 29th
A special tour of the Parkes Radio Telescope followed by a dark sky observing night with the Central West Astronomical Society. RSVP: Friday May 9th.

as shooting stars. Depending on the amount of particles, some meteor showers can have anywhere from a few meteors per hour to over a hundred meteors per hour streaking across the night sky. The showers are named after the direction of the constellation from which the meteors seem to emanate, the point known as the radiant. Hence, the Eta Aquariids appear to originate from the constellation Aquarius.

The best time to view the Eta Aquariids will be on the morning of May 5th, pre-dawn, although meteors can still be seen in the pre-dawn mornings of May 4th and May 6th. A dark sky observing location will help greatly in spotting more meteors. The Eta Aquariids is also one of the few showers this year not hindered by moonlight as it will be new moon.

http://www.amsat.org/showers.html#ETA

Planetary Conjunction

On May 1st, Saturn and the bright star Regulus in the constellation Leo will be very close together - a very nice conjunction that can be photographed easily with any camera and a tripod.

With the winter months come crisper views of the southern sky and a fantastic view of the Milky Way. As winter progresses, the centre of our galaxy starts to rise earlier each night as Sagittarius creeps higher into the night sky.

New moon occurs on May 6th with full moon on May 20th.

Clear Skies!