

Many thanks to Jacquie Milner for editing this newsletter over the past several months, her efforts have been warmly appreciated. Jacquie has found it necessary to relinquish these duties in order concentrate on her work and other commitments. Editorship of the newsletter has now been taken over by myself, Bevan Harris. Any contributions of articles are welcomed, and can either be left at the Observatory office, or e-mailed to me at bmh@bigpond.com. Thanks also to Jacquie for this month's "Highlights" and the feature on star clusters.

Highlights In The Sky

At the start of March only Saturn remains easily visible in the evening sky. By mid month it will be setting during evening twilight and Jupiter will return to the eastern sky, rising in the morning twilight. Keen observers may like to try and find Mercury low in the evening twilight about this time too, especially on the 11th of March when it is in conjunction with Mars. This is the last we will see of the red planet for several months as it moves along keeping behind the Sun.

Venus is shining brilliantly in the morning sky, rising about 3 am. It will reach greatest western elongation (the furthest it will appear to be to the west of the Sun from the Earth) on March 28th. All through March and April it will be a good time to try and see Venus during the day time. It may help to stand in the shade of a tree or building that blocks the Sun from your eye during the morning and look overhead, then try to "defocus" your eyes to infinity. The best day to try this in March is on the 25th when Venus will be only a few degrees from the Moon.

Perth Observatory Open Day

The Perth Observatory Open Day is to be held in conjunction with the National Science Week and Bickley Valley Harvest Festival on Sunday 3rd May, 1998 from 10.00am to 10.00pm. Volunteers are required to assist us for 2-4 hour shifts. Please contact Jamie Biggs by Tuesday April 28th if you would like to be involved.

1996 Volunteers

A reminder to all volunteers from the 1996 intake. If you have not yet completed a new volunteer agreement form, you are urged to do so as soon as possible as the old ones expired on 31st December 1997. For details, please consult the February newsletter. Please take the time to complete these forms as it serves to reiterate and reinforce our commitment to each other.

A Hearty Congratulations...

Congratulations are due to the following Night Tour volunteers from the 1997 intake who have recently come off probation:

Richard de Fonseca, Keith Ford, Marcel Fortsch, Mark Haslam, Lynley Hewitt and Karen Kotze.

Jamie Biggs apologies if he's omitted anyone. To get off probation a volunteer has to be proficient in the use of two of the telescopes used in Night Tours, be able to find and acquire at least four targets of interest, and feel confident in what they are doing on Night Tours. The full-time staff give the volunteer co-ordinator (Jamie Biggs) feedback on this matter after most tours.

Thanks also to Archiving/Historical programme volunteers Brian Goynich and Tricia Turner for repackaging the old Astrographic Catalogue plates. This work was urgently required because the original paper covers were deteriorating. They have now moved on and are assisting the proof reading the latest book of our Honorary Historian, Mrs Muriel Utting, concerning the Observatory during the period 1940-1962. Unfortunately, I cannot report any progress on the long awaited full archiving project - more time is required for planning, as well as funds for equipment and materials.

Yanchep Sun & Stars Festival

Thank you to those volunteers (Lynley Hewitt, Bevan Harris, John Morris, Karen Kotze and Jacquie Milner) who assisted at the very successful Sun and Stars Festival. Over 1900 people attended (a record) and the Yanchep National Park staff were very happy with the astronomy activities we provided. One popular display was our use of a small refractor telescope to project an image of the sun. As well as performing day-time astronomy it generated a lot of interest. Thanks are due to Technical Manager Arie Verveer for putting the telescope together from unused equipment.

Rewards for Superstar Performers

Please note that for those eligible (please consult the February newsletter for details), the last date to claim your reward is 30 April 1998. All the full-time Observatory staff thank you for your wonderful assistance and good company.

Record Night Tour Attendance

January Night Tour attendance set a new record of 757 visitors. February was also very productive with the second highest attendance recorded of 695 visitors. Such figures cannot be achieved without the hard work and dedication of all staff, volunteer and full-time, concerned. Thanks to all who assisted us to reach these milestones.

Practice Nights

There is only one practice night remaining for this year, on 23/3/98. If you would like to attend on this occasion, please contact **Greg Lowe** on 9293 8255 before the night to book a place. Please note that practice nights are limited to 10 people, with priority being given to those still on probation. There will be no practice nights at the end of April or May.

Star Clusters

Several star clusters are viewing target for the Observatory Night Tours. Some we have already talked about in previous newsletters, but I thought it may help to provide some information on star clusters in general.

There are two types of star clusters, open clusters and globular clusters. The Jewel Box (kappa Crucis), an object we often look at this time of year, is an open cluster. It is a good example of a open cluster, There are a few hundred stars, loosely gathered together and lying in the galactic plane. They are usually not very old in galactic terms either. New open clusters are being formed right now in the Orion Nebula and the Tarantula nebula, the Pleiades have just emerged from their surrounding cloud of dust and gas, the remnants of which can still be seen a ghostly blue glow in photographs, and the brightest stars are all hot, young blue-white stars. The Jewel Box is a bit older, still with plenty of young white stars and one prominent older orange-red supergiant star in the middle. On the whole, open clusters do not get very "old". As they lie in the galactic plane they tend to get torn apart from tidal forces within the arms of the galaxy.

Globular clusters are ancient in comparison. 47 Tucanae and omega Centauri are the brightest examples of globular clusters. It is easy to see that their round forms, condensed towards the middle, look like "globes". They also have many times more stars in them, on average in the hundreds of thousands - Omega Centauri is estimated to have 4 million stars and 47 Tucanae one million. Globular clusters orbit the galaxy at eccentric angles, such as at right angles to the galactic plane or in the opposite direction to the motion of the galaxy. The stars in these clusters are much older than in open clusters and are thought to have formed at the same time of our galaxy. Some stars in globulars challenge the estimated age of the Universe at 15 billion years of age. Most of these clusters have survived because of their eccentric orbits but as some of them plunge into regions near the central bulge of the galaxy they may have been torn apart too. Globular clusters have been seen around other nearby galaxies, such as the Andromeda galaxy.

Next time you look at these objects don't think "just another bunch of stars", think "this is an example of stellar evolution in progress!"