

Altair

Newsletter of the Croydon Astronomical Society



October 2009 Issue

Hello and welcome to our eighth edition of Altair

Lectures this month

Friday 9th October 2009	Tonight Keith Brackenborough will look back to the 1973 Total Eclipse . You may have seen the film of Keith & Patrick Moore on the ship.
Friday 23rd October 2009	Astrophotography with a difference is the subject of tonight's lecture by Mike Maunder .

All our lectures are held at the Royal Russell School, and start at 7.45pm

Norman Fisher Observatory, Kenley

The observatory will continue to be open on the Fridays we are not at the Royal Russell School (members), and Saturdays, throughout the summer. Usually we will open around 20:00 UT. Please telephone the observatory beforehand on 020 8668 9642.

Using your donations we recently made several purchases which will be used to improve the observatory facilities; for example sand used for crazy paving being laid in front of the observatory. The crazy paving was free, being illegally dumped near the observatory last January.

Altair_b

The society has an email discussion group. This allows us to relay information on events, or for members who have an astronomical problem to ask for help. Details can be found on our website on www.croydonastro.org.uk, the second item under 'Communication'.

The Altair newsletter will now be published every two months, so if you wish to submit an article for the edition please bear in mind the last date for submission is 15th September.

The Observing Group

At the last observing group meeting, John Murrell covered the subject of variable stars. This was a follow up to our first lecture meeting of September, given by James Fradgley, of Wessex AS.

Unfortunately the weather was poor, so John covered the theory side of variable stars.

Information on variable stars can be found on the following websites:

British Astronomical Association: <http://www.britastro.org/vss/>

Society of Popular Society: <http://popastro.com/vstar/>

American Association of Variable Star Observers: <http://www.aavso.org/>

The last link has extensive information on variable star observing.

The next observing group session will be on Friday 30th October 2009.

Forthcoming Lecture Meetings at the Royal Russell School

Friday 11th October 2009

Keith Brackenborough, of the Eastbourne Astronomical Society and former chairman of Croydon AS, will be visiting us, and talking on the 1973 Total Eclipse.

Keith was with several members of the society who observed the eclipse on a cruise ship. At the same time, Patrick Moore was filming on the ship. Keith will reveal all, and at the end you hear an interesting song, sung by someone we know. Who, you will have to come along, and find out.

Friday 23 October 2009

Mike Maunder, a former member of Croydon AS, will be talking to us Astrophotography with a difference. Mike is an accomplished astrophotographer, and is an elected member of the British Astronomical Association council. This should be an interesting lecture for those who like astrophotography.

Observing in North Cornwall

By Paul Harper

A few weeks ago I was fortunate to stay on my sister's farm, around 12 miles north of Launceston and 9 miles east of Bude.

She is very fortunate to live in a dark sky site, although there a little light pollution from cow sheds. Fortunately my brother-in-law is also interested in astronomy and owns a Mead LX 200 8 inch telescope. It was great to see the Milky Way from the north east horizon to the south west horizon.

I was blessed with several clear nights; which brought some great observing. Whilst I am not an astrophotographer, I used my bridge camera to take some images. This type of camera, gives all the benefits of a compact camera and some of a DSLR, my camera being is a Fuji Finepix S1000.

The camera is a bit limited in respect of astrophotography, the CCD is sensitive to low light, but not enough for faint objects. The camera has a maximum exposure time of 8 seconds at f2.8.

Here are some images I took:



Cygnus



Ursa Major



Perseus



Pegasus and Andromeda

Astronomy Snippets – October 2009

By John Murrell

A selection of things to observe, research on the Internet, or buy.

October is the month where the nights start getting early and there is plenty to observe. The object of the month or perhaps the year is the irregular eclipsing binary Epsilon Aurigae. This star, or should I say stars as it appears to be some sort of multiple star system, has a long period of 27.1 years and the eclipse lasts around 2 years. Solar eclipse fans eat your heart out! This means that the occulting object occupies around 1/12th of the orbit and also orbits at a large distance from the primary star. The orbiting object is also not very massive as otherwise it would cause the primary star to wobble. It is also partly transparent as it only dims the light by a magnitude or so and has a more transparent bit in the centre as there is a mid eclipse brightening. Of course it also does not emit light – at least in the visible. The best model is that it is a disk of dust with a thinning in the middle, and in orbit around a relatively dim G type main sequence dwarf star similar to the Sun. This would not be bright enough to be seen against the centre F type dwarf star.

The eclipse of Epsilon Aurigae has just started so it's a good time to follow. It is easy to observe, as it is circumpolar and about 1 ½ binocular fields to the right of Capella during October evenings. Take some images of this star and those nearby and see if you can record its eclipse. One thing to watch out for is that most of the bright nearby stars seem to be variable as well but on shorter timescales.

A search on the Internet or a review of the astronomy magazines for August to October will tell you more. Try the AAVSO or BAA Variable Star sites for observing details.

Another observing or imaging challenge occurs on the morning of the 8th October 2009, just before Sunrise. Venus is already clearly visible in the East in the pre-dawn sky but on the 8th she will be joined by an appulse, (that's the proper word – it's called a conjunction in some places but that's wrong), of Saturn & Mercury, which will be only 19 arc minutes apart (2/3rds of the Moon's diameter). This should be a good thing to image or view with a telescope. You will need a clear eastern horizon and a cloud free morning. If you miss this morning, Mercury and Saturn will both be visible near each other for a few days around this time. Saturn and Venus have an appulse on the 18th October.

There are many guides to what to observe in the coming year but one of my favourites is the 'Observers Handbook' published by the Royal Astronomical Society of Canada. The 2010 edition has just been published. It's not normally available in the UK but you can order it from the RASC web site directly from Canada. There is not room here to describe all that it covers but it has a good summary of all the major events supplemented by more detailed coverage, (for instance there is a section on the eclipse of Epsilon Aurigae I described above). If you want to see what it contains speak to me at one of the meetings - I usually carry my copy with me for reference.

Product of the month: you need a red light to observe at night so you don't lose your night vision. There are a number of options on the market but the red head torch manufactured by 'Energizer' and described as headlight LED x 3 is one of the best and also one of the cheapest. This has a slide switch which allows you to turn on either the red or white LEDs. There is a more expensive model which has 5 LED's, but don't buy this as it's a case of less is more. The more expensive 5 LED version is operated by a push button switch that cycles through 'off' - 'bright white' - 'very bright white' - 'bright red' – 'off'. As a result everyone around you loses their

night vision when you turn it on. The alternatives of either covering it up when turning it on or leaving it on red all the time either on your head or in your pocket don't work too well. They are available from that well known astronomy supplier, Screwfix, for £8.78.

Finally for this month, ESO have just published three high resolution images of our Milky Way Galaxy as part of their contribution to the IYA2009. The level of detail is amazing. One of the images was taken using an amateur telescope from Paranal. Go to: <http://www.gigagalaxyzoom.org/W.html> and zoom into the images. You can also download and print them if you have a high-resolution printer.

That's it for October – I hope to be back next month with some more Astronomy Morsels.

Main Astronomical Events in October

8th - 7am, Mercury 0.3° south of Saturn.

12th - midnight, Moon 1.2° south of Mars.

12th - 1am, Moon 1° south of Saturn.

13th - 11am, Venus ½° south of Saturn.

16th - 8am, Moon 6° south of Saturn.

16th - 2pm, Moon 6° south of Venus.

17th - 5am, Moon 7° south of Mercury.

20th - midnight, Orionid meteors maximum.

27th - midnight, Moon 3° north of Neptune.

27th - 7am, Moon 3° north of Jupiter.

30th - midnight, Moon 6° north of Uranus.

Moon

Full Moon	Last quarter	New Moon	First quarter
04d 6h	11d 9h	18d 6h	26d 1h

More information and details can be found at: <http://www.popastro.com/spapop/skydiary.pdf>

If you take any images of these please send them to me at the email address below or hand a picture to me during a meeting, and we will publish it in Altair and/or our website.

Editor: Vivienne Marshall

If you would like to submit a picture or an article, please send by emailing me at: altair09@croydonastro.org.uk. Alternatively you can contact anyone on the committee to forward to me. Contact details are on our web site: www.croydonastro.org.uk.

I will welcome any comments you may have.