

Sky Notes: 2010 August and September

by Callum Potter

The warm evenings should still be with us in August and September, making visual observing a real pleasure without having to suffer the sub-zero temperatures of winter. Nights, though, are still short, so best take advantage when you can. In September many will be looking forward to the star camps that will be taking place. I expect to be at Kelling Heath this year, so please look me up if you are there too (see <http://www.starparty.org.uk/> for details).

I wonder what I will forget to take this year? I try to start a check list early, and keep adding items as they occur to me. However, I still manage to forget something. Last time the main thing forgotten was my short step-ladder – which is only really needed to view objects at the zenith with my Dobsonian, but whenever camping you have to improvise, and I found a packing crate that served the same purpose. Another year I forgot my camping chairs and spirit level, but a quick trip to the shops in Cromer solved that.

Sun

The Sun continues to provide some moderate activity, so observations on clear days may well prove fruitful. White light sunspot observations and drawings using the projection method are still valuable. You don't need an expensive H-alpha scope to do useful work. The autumnal equinox occurs this year on September 23.

Noctilucent clouds

Do still keep an eye open for NLCs, especially in August, but also in early September, though the season is ending due to the Earth/Sun orientation.



An image by Peter Garbett of Jupiter and Ganymede on 2010 June 3, showing the planet without its familiar SEB.

Moon

The Moon is new on August 10 and September 8, and full on August 24 and September 23.

Planets

The inner planets, **Mercury, Venus and Mars** are not well placed in August, and only Mercury makes a favourable apparition in September. Actually Venus will be observable in August, but it will be very low in the west after sunset, and will need a good horizon to make any sort of observation.

In the second half of September Mercury will be nicely available in the pre-dawn sky in the east, in Leo, and will be at its maximum altitude on September 23. You should be able to use Regulus (Alpha Leonis) as a finder. Mercury will be about 10° lower at best, but should be fairly obvious with no bright stars in the vicinity.

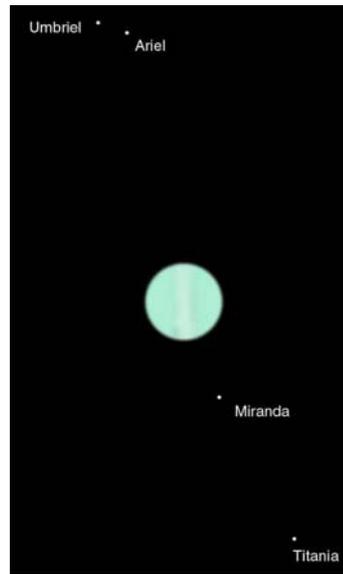
Jupiter is very favourable these months, as it approaches opposition on Sept 21. At the start of August the planet's disk will be around 46 arcseconds, which will rise to nearly 50" at opposition. On August 27, the Moon will be just a few degrees away, and may make an interesting photo opportunity.

The disappearance of the South Equatorial Belt was quite a surprise when Jupiter re-appeared this year, but it will surely be just a matter of time before it returns, and there may be interesting storms to be seen, so regular observations are recommended.

Jupiter will be an ideal finder for **Uranus** during these two months, and the planets will come to a one-degree-separation conjunction on September 18. However Uranus' disk is a mere 3.7", some 13 times smaller than Jupiter, so a high power and good seeing will be needed to resolve its greenish disk.

Some observers manage to view some banding, and high resolution imaging using a webcam or a planetary astro-camera would be interesting. The Saturn Section of the BAA coordinates observations of Uranus (and Neptune), so if you make any observations please pass these on to Mike Foulkes.

The satellites of Uranus are also interesting targets. The brightest is Titania, which will be around magnitude 14.4, with Ariel and Oberon



Uranus and satellites drawn by Paul Abel on 2009 September 12, observed with the 24-inch refractor at the Lowell Observatory, Arizona.

slightly fainter but still at 14th mag. 15th mag Umbriel may also be seen if you have a large scope, but 16th mag Miranda will be a big challenge.

Saturn is low in the west, and heading towards solar conjunction, so while it may be observable in early August, by September it will be effectively out of view.

Neptune lies in Capricornus, and is at opposition on August 20, but high power will be needed to resolve its tiny 2.5" disk.

Pluto is in northern Sagittarius, and will be better placed in August than September. However positively identifying the mag 14 dwarf planet will be particularly

challenging in this star rich area.

Meteors

Meteor activity picks up in August with a number of showers. Low rate showers the Delta and Iota Aquarids have peaks around August 6, but the premier shower, the Perseids, has a favourable maximum on the night of August 12/13 due to the New Moon on August 10. (See also the article by John Mason on page 195.)

The Perseids are fast bright meteors, making them a good target for photography, either with film or a digital camera (a digital single lens reflex camera would be best), simply mounted on a tripod, set for a long exposure and triggered with a remote shutter release. Meteors can appear anywhere in the sky, so it's difficult to recommend any specific direction to look at, and inevitably if you set your camera to look in one direction, then meteors will appear in other areas of the sky. For those wishing to make visual observation records, forms can be downloaded from the Meteor Section website.

September has a favourable maximum of the Piscids on Sept 9, but rates are low.

Comets

Comet C/2009 R1 (McNaught) was an easy binocular target in June, and was imaged by



Image of UGC 10822 the Draco Dwarf Spheroidal Galaxy by John Moore, Farnham, UK. Imaged from Tenerife with a Pentax 105SDHF and SBIG ST10XME camera

many, but it has been unobservable in July and now must be considered gone from view. However McNaught's other comet of the year, C/2009 K5, is still observable though fading, and a small telescope will be needed to catch it.

Of more interest to casual observers will be 103P/Hartley 2, which brightens through these months as it approaches perihelion in October and a close approach to the Earth, so it could be naked eye visible in October. This comet was discovered comparatively recently, in 1968, by Martin Hartley at the UK Schmidt Telescope unit in Australia. It is a short period comet returning every 6.46 years. Interestingly, it is the target for a flyby by the *Deep Impact* probe in November, as part of the EPOXI mission (Extrasolar Planet Observation and Deep Impact Extended Investigation).

Deep sky

The late summer skies contain so many spectacular deep sky objects, it's hard to know where to start. But if you are preparing for one of the many star camps happening soon it's well worth thinking about your targets before you go. While some observers like to focus on one or two constellations and view all sorts of objects within those constellations, I quite like to choose a particular class of object to view, and try to view many around the available sky. So on a particular night I might be mainly viewing planetary nebulae, or globular clusters, or galaxies.

At this time of year there are so many interesting nebulae and clusters about, that galaxies perhaps don't get the attention they deserve. Draco also seems to be a rather un-

observed constellation, perhaps because it meanders in the northern sky, but does host a wealth of interesting galaxies. NGC 5866 is an interesting lenticular galaxy with a striking edge-on dust lane. There is speculation that this galaxy may be a candidate for [the miss-

ing] M102, though Méchain later claimed that M102 was a duplicate of M101, but his original written notes about M102 suggest that this could have been a real recording of 5866.

Also comparatively bright in Draco are NCG 4236, a barred spiral, part of the M81 galaxy group, and 4125, an elliptical. A rather more challenging object for visual observing is UGC 10822, also known as the Draco dwarf spheroidal galaxy. It has rather low surface brightness making a dark site essential, and it may be mistaken for a cluster. This galaxy is part of our local group, and a mere 260,000 light years distant.

For astro-imagers, the Draco Triplet of NGC 5985, NGC 5982 and NGC 5981 provides a rather fine view of a face on spiral, an elliptical, and an edge-on spiral, all within a quarter of a degree. Deep images of these galaxies reveal a plethora of background galaxies too. Visual observation of the triplet is also possible but you may need a 25cm or larger telescope to make a positive record.

If you do manage to make any observations of these objects, please send them to the Deep Sky Section Director, Stewart Moore, who will appreciate images, drawings and written reports.

Callum Potter

Saturday September 25, 10:30-17:30
at Burlington House, Piccadilly, London W1

BAA Observers' Workshop: Asteroids, Comets and Meteors

presented by Section Directors Richard Miles,
Jonathan Shanklin and John Mason

with contributions from Peter Birtwhistle, Roger Dymock, Andrew Elliott, Len Entwisle, Tim Haymes and Nick James.

An overview of observing techniques, both visual and the latest high-tech developments. Introduction by Section Directors during the morning session followed by workshops in the afternoon. Topics include astrometry, photometry, occultations, automated cameras for meteor detection, robotic observing, cometary image processing and visual work.

Come and participate in this cutting-edge workshop which will include an exchange of ideas on new and exciting observing projects. Want to discover a comet, study TNOs at the far edge of our Solar System or determine the physical and orbital characteristics of meteoroids entering the Earth's atmosphere? – then do come along and join in what should be a fascinating day.

The cost is £4 to members, £6 non-members, payable at the door. Afternoon tea will be provided but please make your own arrangements for lunch (13:00–14:30). There are many options within a short walking distance of Burlington House.

N.B. If you are planning to attend, it is important to let the BAA Office know in advance (Tel. 0207 734 4145, e-mail: office@britastro.org) since we may be restricted on numbers for some sessions. In particular, please indicate your order of preference for the afternoon workshops on Asteroids, Comets & Meteors. Thank you.