

Sky Notes: 2012 February & March

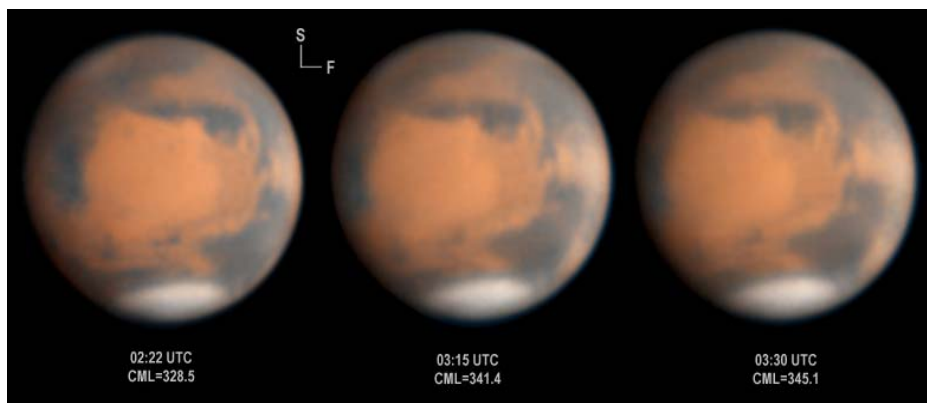
by Callum Potter

What a difference a year makes! Last year when I was writing the February/March Sky Notes we were experiencing some of the coldest and snowiest weather we had seen for many years, in all parts of the country. This year, the weather has been much warmer, if a little on the windy side. Visual observing in the cold of winter may not be particularly comfortable, but if you equip yourself with warm clothing it may not be too unpleasant. Be sure to wear a good hat – microfleece or woolly, or one of each. Much of your body heat is lost through the head, so keep it warm.

Multiple layers is the key to keeping warm, thermal under-layers designed for sports people, cyclists, or bikers can be used as a good base layer. A top layer that cheats the wind is a big help. And don't forget your feet. Stand on an insulated mat rather than the bare ground, and wear warm boots (perhaps of the apres-ski variety), this should keep your toes toasty. And don't forget to take on hot drinks and perhaps the occasional snack. If you do feel yourself getting cold, do head indoors and warm up – the last thing you need out there is hypothermia.

It seems strange to be talking about spring already, but the spring equinox (also known as the vernal equinox) occurs on March 20, when the Sun crosses the celestial equator, and for one day we have equal hours of night and day (approximately!).

The clocks go forward on March 25, when the UK switches to British Summer Time, one hour ahead of the astronomers' Universal Time.



Images of Mars by Damian Peach using a 355mm SCT on 2010 January 1, when the planet's diameter was 12.68", even less than it is this apparition.

Sun and Moon

Although solar activity has increased over the past couple of years, our star can still hardly be said to be active. There are usually a few spots to be seen though, and some prominences available most days when viewed with a solar telescope, so it's certainly worth continued monitoring.

The Moon is full on February 7 and March 8, and new on February 21 and March 22.

There are a couple of grazing lunar occultations in March which may be of interest, as these cover fairly wide areas of the country. On March 4 the graze of 2B Cancri, a magni-

tude 6.0 star, will be visible along a line running from London to mid-Wales. And on March 13, mag 5.8 172B Libri has a graze along a line running from Lincolnshire towards Glasgow, and passing over Leeds.

For more details of the tracks .see your BAA *Handbook*. If you need a more accurate prediction for your local circumstances, please contact the Director of the Computing Section.

There are also a few full occultations of bright stars. On February 8, the disappearance of omega Leonis (6th mag); March 6 the occultation of alpha Cancri (mag 4.25). Again consult your BAA *Handbook* for a few more possible targets these months.

Observers' Forum – continued from previous page

The lunar eclipse of 2011 December 10



In the UK the Moon rose at around 15:52 in the final stages of the eclipse, with the penumbral phase lasting until 17:30. This image was taken from South Wales by Martin Griffiths at 16:13UT with a Canon D10 DSLR on a 100mm Vixen refractor.



In Saudi Arabia the eclipse (below, with a Meade ETX 125.5) began at 18:00 local time. Abdu Arishi sent these photos from Qara'awi secondary school, Jazan.





Planets

You should be able to catch all five of the naked eye-visible planets over the next two months.

There is a particularly good apparition of **Mercury**, which will be visible from UK locations from around February 20 to March 16 in the early evening, just after sunset. Mercury will be highest in the sky around March 6.

Venus continues to be brilliant and unmissable in the evening sky.

Mars reaches opposition on March 4. Its disk will achieve only around 14" diameter, but is still worth observing visually or electronically.

Jupiter is heading west, but is still available for observing. It is on its way towards solar conjunction in May, and will be difficult by April.

Saturn is approaching opposition in April, and starts February with the rings having an apparent diameter of around 41', which will reach around 44' by the end of March.

Uranus and **Neptune** are pretty much unobservable, though see below.

Throughout these two months, there are a number of interesting little 'dances of the planets' and conjunctions with the Moon.

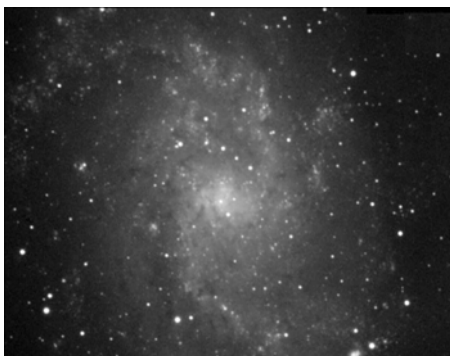
On February 9 to 10 Venus and Uranus will make a close approach (actual conjunction takes place on Feb 10 at around 02:00UT, well after setting in the UK). This will be a difficult observation due to the brightness and glare from Venus. It may be best to use binoculars or a small telescope, and keep Venus just out of view.

Although low down, the new crescent Moon on Feb 22 and 23 can be used as a finder for Mercury, which will be low to the horizon (so try to get a good western horizon). On Feb 25 the Moon makes a close pass of Venus, then on Feb 26 she is close to Jupiter.

Venus and Jupiter do a nice little dance from March 9 to 17 (or so), with closest approach and Venus crossing Jupiter's path on March 14.

Comets

In recent years it seems that the best 'new' comets have been best viewed from the southern hemisphere. However for those of us in the North, we still have one quite bright comet to view – C/2009 P1 Garradd. Many viewed it in



Marathon target: galaxy M33 imaged by Jeremy Shears.

2011, and until recently it has been difficult due to solar conjunction. In February, however, it becomes more readily available in the early morning and as it becomes circumpolar it will be visible for much of the night. At the start of February it is in northern Hercules, and will make a quick sweep past M92 on Feb 3 and 4. It moves rapidly north into Draco, then Ursa Minor, before crossing into Draco again, and then into Ursa Major in late March. Although unlikely to be naked eye visible, it should be easily viewed with binoculars or a small telescope. See page 57–58 for more information and an observing chart for Comet Garradd.

Deep sky

Around the vernal equinox is one of the best times to embark on a Messier Marathon. At this time of year it is possible to view all the Messier objects in a single night. Messier and Mechain did not have a systematic approach to surveying the sky, so the objects are not uniformly distributed. However, it's not possible to view all the Messier objects from the UK – there are a couple of objects that are too far south to be viewed at this time of year (or any time of year for that matter). Although I have observed most of the Messier objects, I have never tried a Marathon, but it's on my 'to-do' list and if we get good weather this year, I'll certainly be giving it a go.

To my mind using a GOTO telescope for the Marathon is a bit like cheating – and in fact you may be more likely to complete a marathon with a manual Dobsonian Newtonian reflector, as the

slewing time will be much quicker, and you won't run out of batteries over the night. It's certainly easier to complete the Marathon if you have viewed all the objects before, preferably with the same telescope – this will aid the identification of each one. Of course you don't need to use the same telescope for all the objects; you could use binoculars or even the naked eye for a few.

You'll need a good night, and you'll need to start as soon as it gets dark and pick off the objects that are setting, before they go. Then you can work your way across the sky letting objects come into view. Good western and eastern horizons are helpful, so you can pick up the first objects as it gets dark, and the last ones as they rise in the early morning. The spiral galaxies M77 in Cetus and M74 in Pisces are the first ones to try for – you need to get these as early as you can, followed by M33. At the end of the night, the Messiers in Aquarius (M2, M73 and M74) and Capricornus (M30) will be pretty difficult to catch before sunrise.

If you fail to find any on the way, it may be best to press on – if time allows you might be able to return to confirm the object later.

There are many lists on the internet and books about the Marathon, with suggested search sequences. I don't think any order is particularly the best. You will certainly get most success if you plan and prepare well in advance, so you are ready for the night.

If you have tried a Messier Marathon in the past, or are attempting one this year, I would certainly like to hear what success you have had. Please do let me know, and good luck!

Callum Potter

Deep Sky Section

Deep Sky Section Meeting 2012

After a visit to Newbury in 2011 Deep Sky Section is returning to Northampton in 2012. The meeting, hosted by the Northamptonshire Natural History Society, will take place on Saturday March 10 at the Humfrey Rooms, 10 Castilian Terrace, Northampton NN1 1LD. For directions to the venue see <http://www.nnhs.info/general/location.htm>. There are plenty of public car parks near the venue and Northampton is easily reached by train from London and the North.

2012 marks the 25th anniversary of supernova 1987A in the Large Magellanic Cloud and several of the talks will have the death of stars as a theme. The programme is still being finalised but speakers and topics confirmed so far include:

Stewart Moore:	a review of the deep sky year
Robin Leadbeater:	the spectra of dying stars
Bob Winter:	the death of stars
Martin Lunn:	dating Cassiopeia A and its implications
Chris Longthorn:	observing from New Mexico skies
Andrew Robertson:	building and using a large Dobsonian telescope

The professional talk will be given by Dr Matthew Malek of Imperial College, London, on 'Cosmic Genesis: a unique view of the birth of a neutron star'.

Coffee and tea will be available from 09:30 with the meeting starting at 10:00. The entrance fee of £10 (payable at the door) includes tea and coffee throughout the day along with a buffet lunch. It is hoped that the BAA, the Webb Deep Sky Society and Aurora Books will have sales stands at the meeting.

All BAA members and friends are very welcome.

Stewart Moore, Director