

SPACEWATCH

the newsletter of the Abingdon Astronomical Society

October 2001

“The Planet Mercury”

by Sebastian Linfoot, Abingdon AS.

Of the planets easily visible to the naked eye, Mercury is the probably the most elusive. Being so close to the Sun, it is almost always hidden in the glow of sunrise or sunset, being visible only when its orbit carries it furthest away from the Sun in the sky as seen from Earth. Tonight, Sebastian Linfoot will talk to us about this most elusive of planets, named after the Roman messenger god due to its speedy travel across the sky from day to day.

The Night Sky this Month

The planets

Mercury moves into the morning sky by about the 3rd week of October, and will be visible in the south east. This is quite a good apparition, particularly so from about the end of October to the middle of November when Mercury and Venus will be quite close together. As Venus is so easy to find, this is your chance to catch a glimpse of Mercury as it will be the bright 'star' close to dazzling Venus. They will be particularly close on October 30th, when Mercury will be one degree north of Venus.

Venus is the really bright object dominating the eastern sky before sunrise and still visible to the naked eye after sunrise.

Mars is very low above the southern horizon in the evening. It's the brightest object in the southern sky after sunset at magnitude -0.7 and is orange in colour. If you haven't seen it this year, you haven't much time left before it gets two close to the sun again. This is an opportunity which won't return for almost two years.

Jupiter is around magnitude -2.3 in the morning sky in Gemini. It rises around 11pm.

Saturn is around magnitude -0.3 to the far right of Jupiter in Taurus. Not too far away to its right is the orange star Aldebaran, the brightest star in Taurus.

Uranus (mag. 6) and Neptune (mag. 8) are both in Capricornus all month. Pluto (mag. 14) is in Orphiuchus.

Occultations

A splendid sight awaits us on November 3rd. That evening, the Moon is going to pass in front of Saturn. The planet will be occulted at 21.04UT, and will reappear from behind the Moon at 22.02 UT. The Moon will be reasonably high in the east at this time. Believe me, it may not sound dramatic, but to actually

watch it in a telescope is certainly interesting. The Moon will be two days past full and so will be big and bright. Binoculars will show the event, but Saturn will remain a 'star' like object. Obviously a telescope will show the rings and the planets disc and will give maximum thrills. With the moon being so bright, the naked eye may struggle to see the planet actually be occulted, but you will have to step outside to check if you CAN see the event. If it's clear, make sure you see this one. Not only is it spectacular, but it occurs at a civilised time of night.

Meteors

We are about to enter a very good period for meteors, and it will last right through to December. First, we have the Orionids, which are visible from October 16th to 27th. While not a dramatic shower, they are well worth looking out for, especially on the 20th October which is when they reach maximum. The Moon is only 3 days old then and so is not a problem. Also during this period there are the Taurids. This shower is active for a long time, from October 20th to November 30th in fact. While their rates are always low, they are often bright. Their maximum is November 3rd, but a bright Moon ruins that night for meteor watching. However, as they are on show for so long there is plenty of opportunity to see them when the skies are Moon free. Next month we have the Leonids, and in December the Geminids, so try getting some practice in with the Orionids and Taurids.

Minor Planets

If you've ever wanted to try and see an asteroid the next couple of months provides about the best chance you'll ever get. Vesta, the fourth largest of the minor planets, which orbit between the orbit of Mars and that of Jupiter, will be in and around the Hyades in Taurus through October and November. Magnitude 7 in October, brightening to $+6.5$ by the end of November. So it will be very easy to see in any binoculars, let alone a telescope.

Moon Phases:

Full: 2nd; Last Quarter: 10th; New: 16th, First Qtr: 24th.

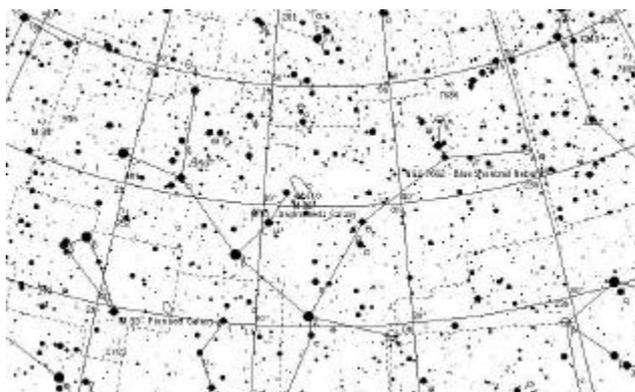
This month's Deep Sky Object

By Paul Warren

After last month's opening, you may be relieved to know that this month's offering is one of the easiest deep sky objects there is. Indeed, it is even visible to the naked eye from a dark sky site. However, the fact that it is easy to see doesn't mean it can't pose some challenges to the observer. So, ladies and gentlemen, please give a big hand for M31, otherwise known as The Andromeda Galaxy.

M31 is easy enough to find. The easiest way to find it is to hop from α Andromedæ to δ And., from δ to μ , from μ to ν and M31 will be easily visible, even in the most abjectly dismal of finderscopes! I

sometimes just follow the line from one of the “V”’s in the “W” of Cassiopeia.



The one thing that everyone can see in M31 is the nucleus of the galaxy. M32, one of its satellite galaxies, is also a fairly easy target to spot. The other “bright” satellite galaxy is M110, and this can be bothersome, especially under light-polluted skies.

Most people at their first time of observing M31 want to see its spiral arms – after all, these show up rather nicely in lots of photographs. After seeing only the nucleus, there is sometimes a sense of disappointment. “What’s gone wrong?”. “Is something wrong with my telescope?”.

You have to remember that M31 is not face on – in fact it is closer to edge on than face on, so seeing spiral arms is not going to be an easy job. Also, galaxies really do demand patience and perseverance from the observer, especially if you are looking for detail.

The big bright blob that you see is actually the nucleus of the galaxy – the trick is to spot the rest of the galaxy, which is a haze which diminishes in brightness the further you move away from the galaxy.

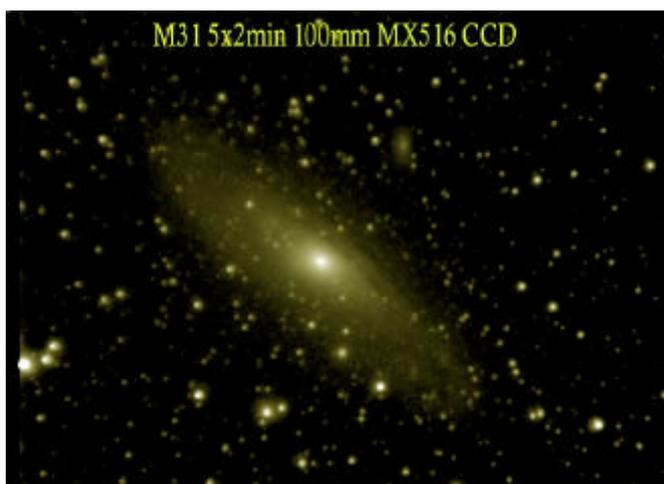


Photo by society member Paul McGale.

On very good nights, you should be in with a chance of seeing some of the dust lanes between the arms, especially in the southern part of the galaxy. No, it’s not easy, but it can be done. On a really excellent night (unfortunately usually a very cold one too!), see if you can spot a slight increase in brightness in part of the southern part of the galaxy. If you spot this, then

you’ve bagged NGC 206, which is a huge star forming nebula in M31.

M31 is the nearest galaxy to our Milky Way (ignoring our satellite galaxies), believed to be over 2 million light-years away. Its diameter is about 180,000 light-years. It is believed to contain some 300 – 500 billion stars and may be the largest galaxy in our local group of galaxies.

Dark Spot on Jupiter

It sounds like a scene out of “2001 – A Space Odyssey” but there are reports of a dark region having appeared on the planet Jupiter, in the north portion of the North Equatorial Belt. It is becoming the most prominent feature on Jupiter, almost as dark as the shadows of satellites in transit. Central meridian transit times of this phenomenon can be important in measuring drift relative to the surrounding cloud bands. All you need to do is measure to the nearest minute when the feature crosses the central line of the planet’s disk, as the planet rotates (approximately every ten hours).

FAS Convention

The Federation of Astronomical Societies (FAS) Convention is to be held at the Rutherford Appleton Labs on 13th October. Doors open at 9.00am, the first talk being at 10am. Tickets are £6 each. There is good selection of speakers plus trade stands, so this should be a good day out.

SOCIETY E-MAILING LIST

The society’s e-mailing list is used to publicise “first-clear-night” observing evenings and for alerting members to hot news on objects to observe.

To subscribe: send an email to abiastro-subscribe@topica.com .

You will then receive all e-mails sent to the list.

To post e-mails on the list: send an email to abiastro@topica.com .

To unsubscribe: send an email to abiastro-unsubscribe@topica.com

WEB SITES

Don’t forget the new web site address for Abingdon Astronomical Society:- <http://www.abingdonastro.org.uk>

Our webmaster, Chris Holt, would welcome any material for the members observation page – particularly photographs.

ISS/Iridium data:

<http://www.heavens-above.com/main.asp> .

Space weather & aurora forecasts:

<http://www.pfr.alaska.edu/~pfr/AURORA/INDEX.HTM> .

DATES FOR YOUR DIARY

15th to 19th October (First Clear Night): Observing Evening at Compton.

29th October: Beginners’ Meeting (Repeat) in the Perry Room. 8pm.

12th November: Speaker Meeting 8pm. “Meteors” by George Spalding of the Rutherford Appleton Laboratory.

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