

SPACEWATCH

the newsletter of the Abingdon Astronomical Society

Next Talk
9th May 2016

**AGM followed by talk on the
2016 Indonesia Eclipse**
Gwyneth Hueter (Abingdon AS)
Start time 20:30 – (note change)

Preceded by:
Mercury Transit event 12:00-19:30

THE NIGHT SKY THIS MONTH

by Bob Dryden

Transit of Mercury: One of the most interesting astronomical events of the year takes place during the day on 9th May when the planet Mercury passes across the disc of the Sun.

The transit starts at 11.12 UT (12.12 BST) when the Sun will be 55° above the horizon, about one hour before culmination in the south. Mercury will be midway through the transit at 14.56 UT and the transit ends at 18.40 UT (19.40 BST). By then the Sun will be low (about 8° high) in the west. So the whole event occurs over a 7 hour 28 minute period, so there is no need to rush about. Except at ingress and egress (as Mercury enters and leaves the solar disc), which only last about 3 minutes for each of them.

TAKE GREAT CARE WHEN LOOKING AT THE SUN

Obviously, do not point your telescope at the Sun without adequate filters otherwise you could be permanently blinded. If you are not sure what you are doing, use the projection method to observe the transit which is much safer as you do not actually look through the telescope at all. Or join us for our public transit observing event on the open fields beside Abingdon United's ground in Northcourt Road.

Mercury: Visible in the evening sky, Mercury reaches Greatest Elongation on 18th April when it will be 20° from the Sun. However, the little planet is not very high and will move rapidly back into the solar glare. On top of that, while it starts at a bright -0.7 magnitude, it quickly fades, reaching +0.8 magnitude by 22nd April and a poor +1.8 magnitude by the end of the month.

All this means you have about 10 days in which to see Mercury before observing conditions are too poor. As this session starts, Mercury is 15° high in the west at sunset, setting about 90 minutes after the Sun. It should be fairly easy to find it at this point. By the end of April it is just 10° high at sunset but is much fainter, making it a difficult object to find. Inferior Conjunction with the Sun occurs on 9th May - TRANSIT DAY

Venus: Sadly, Venus is now too close to the Sun to be seen.

Mars: With opposition approaching (22nd May) Mars is getting quite bright and a decent size in the telescope. It starts this session at -0.9 magnitude in Scorpius, which means it is already a bright object, but by May 9th it has increased in brightness to -1.8 magnitude. Only Jupiter, Venus, and the Moon are brighter. In the telescope, the apparent size of the disc increases from 12" to 17" by early May so detail on the Martian surface will be visible in good seeing conditions despite the low altitude of the planet.

Currently Mars rises around 23.00 UT, culminates in the south at 03.00 UT (at a rather low altitude of 16°) and is 12° above the south western horizon by sunrise. By early May these times have moved forward by 2 hours but the planet is just 5° above the south western horizon at sunrise.

During all of this session Mars, Saturn, and the bright star Antares are all within 5° of each other forming various triangular shapes. On the 25th April the waxing gibbous Moon will be approximately 3° from Mars (with Saturn also nearby).

Jupiter: Very well placed for observation in Leo, Jupiter is very easy to see at -2.3 magnitude (only Venus and the Moon are brighter). Already 35° high in the south east at sunset, culmination is reached at 22.00 UT, and at 04.00 UT the planet sets. By mid-May Jupiter is already in the south at sunset and sets around 02.00 UT. This means you have several hours with Jupiter well above the horizon in which to point your telescope at it to view its cloud tops and satellites.

On 17th April the waning gibbous Moon will be approximately 2° away from Jupiter.

Saturn: Although starting to rise earlier, Saturn is still best viewed in a telescope well after midnight. It is presently culminating in the south about 04.00 UT and by sunrise is 15° above the south western horizon. While still in Ophiuchus, its declination is low, meaning that it only reaches a maximum of 17° above the horizon when in the south. However, while the seeing may be dodgy that low down, the rings are wide open at 26° so you will be able to make them out easily enough. By mid-May Saturn will be appearing over the south eastern horizon around 22.00 UT, culminate at 02.00 UT and be less than 10° above the south western horizon by sunrise. On 26th April the waning gibbous Moon will be 3° from Saturn (with bright Mars close by further west).

Uranus & Neptune: Uranus is too close to the Sun to be seen this session. While, technically, Neptune is visible very low in the morning sky, to all intents and purposes it is too close to the horizon to be seen early in this session. By mid-May it will be 15° above the south eastern horizon at sunrise, in the constellation of Aquarius. However, it will be a rather faint +7.8 magnitude and will be very hard to find.

Meteors: The Lyrid meteor shower is active between 18th and 25th April but a Full Moon will wreck any chances you have of seeing very much.

One other shower is worth a mention although you will only see a few meteors from it. The Eta Aquarids can be seen between 24th April and 20th May, reaching a maximum on 5th and 6th May. The Moon will be no problem as it is 28 days old then and just a thin crescent. Unfortunately the Eta Aquarids is a southern shower, meaning that a good percentage of the meteors are not visible from the UK. However, with a maximum hourly rate of 40, you can still see a fair few if you take the trouble to look.

Ocultations: On 21st April, at 00.10 UT, the +4.4 magnitude star Theta Virgo is occulted by the Moon. The Moon will be one day before Full so you will need a telescope to see the star disappear behind the dark lunar limb. The Moon will be 32° high in the south at the moment of occultation.

Asteroids: There is just one bright asteroid on view this session and it is not even a proper asteroid. It is 1 Ceres which is now a dwarf planet rather than an asteroid. It will be a rather faint +9.3 magnitude in the constellation of Cetus. This means of course that Ceres will be low down in the dawn sky, making it rather difficult to see.

Comets: Comet P/SOHO 2001D1 will be appearing in the evening sky, but fading throughout the session. It starts in Aries, shining around 5th magnitude, although it will be deep in the twilight, so hard to see. The comet moves in to Taurus on 18th April. By the end of April it will have faded to 7th magnitude but moved in to a slightly darker sky. On 7th May it enters the constellation of Orion but will be approximately 9th magnitude by then.

NOTICE OF ANNUAL GENERAL MEETING

The Annual General Meeting for 2015/16 will take place on Monday 9th May 2016 at All Saints' Methodist Church Hall, Dorchester Crescent, Abingdon at 8.30 p.m., and will be followed by a talk on the 2016 eclipse in Indonesia by Gwyneth Hueter.

Agenda

1. Apologies for absence
2. Minutes of the previous Abingdon AS AGM (held 11/5/2015)
3. Matters arising
4. Presentation of Committee's report
5. Presentation of Treasurer's report and Adoption of accounts
6. Setting of membership fees for 2016/2017
7. Election of officers
 - i) Chairman ii) Secretary iii) Treasurer
 - iv) Publicity Officer
8. Election of other committee members (between one and six in number)
9. Any other business

Chris Holt, Secretary, Abingdon Astronomical Society

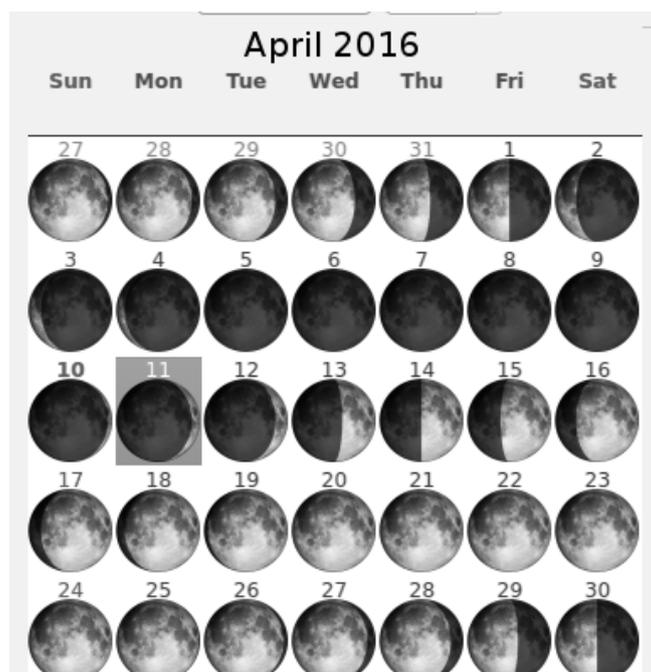
NOMINATIONS FOR ELECTIONS TO COMMITTEE

Nominations are sought for the posts of Chairman, Secretary, Treasurer, Publicity Officer and between 1 and 6 other committee members.

Under the Constitution of the Society, the "candidates for election shall be proposed and seconded by ordinary members of the Society and the nomination, including the candidate's signature, submitted in writing to the Chairman at least four weeks prior to the Annual General Meeting"(para. 10.3.3). Ordinary members are all those who are not honorary members or affiliated members.

The Constitution goes on to say that, "in the event of there being no candidate for the election of an officer of the Society, or fewer than ten candidates for the election to the Committee, the Chairman may accept nominations given at the meeting" (para. 10.3.4).

MOON PHASES:



OUR KENNEDY MOMENT

by Chris Holt

You must be aware by now that Ian Smith will be standing down as chairman of Abingdon AS at the AGM on 9th May. Ian has been chairman for ten years and was treasurer before then. Ian has done an excellent job as chairman and has carried out many functions beyond the chairman's role, such as leading observing evenings for many years, booking speakers for meetings, giving outreach talks to other groups, and managing the website.

Also, Trevor Pitt, another very hard working committee member, will be standing down at the AGM. For the Society you value to continue in anything like its present form we need members to join the committee. As John F. Kennedy almost said: "Ask not what Abingdon AS can do for you, ask what you can do for Abingdon AS".

KELLING HEATH STAR PARTY APRIL 2016

by Owen Brazell

Two members of the society John Farr and Owen Brazell braved the annual spring trek to Norfolk to observe under

dark skies but with rather different objectives. John had his imaging rig and was going to use his Altair 115 APO to do wide field imaging and Owen had taken his 22" Dobsonian to do visual observing. The star party was already underway when both arrived and were greeted by how those people who had already been there on the Monday and Tuesday had had two all-night runs under clear skies. Bearing in mind that you still get maybe 6 hours of astronomical dark.

Wednesday was also showing very dark and transparent skies but with a howling gale that was going to make observing impossible. The winds died down somewhat at about 1:30 the following morning enabling one of my friends with a 24" Dobsonian and drive system to work. So he and I braved the quiet field to observe some Abell planetaries at low power, as the wind still made high power observing impossible. We also chased down comet C/2014 S2 PANSTARRS and found it in the same field with a nice edge on spiral galaxy. The clouds rolled in again about 3:30 so we packed it in.

The following night did not look very promising with very high clouds and haze. Nevertheless, following the example of our ex-chairman we got up again about 2 and watched the clouds but were rewarded with a break about 3:30 when we were able to catch our first view of comet P/252 LINEAR with the telescopes. It had been seen the previous morning in a gap in the clouds with 7x50 binoculars. Some friends were there with a 6" refractor and we spent the early evening looking at Jupiter as it had two shadow transits going on. As the skies got better we uncovered the larger telescopes and by then the GRS had rotated into view and we could easily see its brick red colour. The comet turned out to be huge and even with the widest field eyepiece it pretty much covered the field and we estimated it to be about half a degree across. We did find that it responded very well to the use of a Swan band comet filter which made it stand out extremely well.

The main Saturday when the trade stands came was very poor with constant rain all day and very heavy downpours. The forecast showed it clearing about 01:00 the following morning, so everyone had an early break and were rewarded when the forecast proved right and the skies did clear about one which would have given us 3 hours of astronomical dark to observe. Unfortunately, from my point of view right from the off I had problems with my eyepieces dewing up all the time and the Argo Navis telescope pointing systems proving unreliable. That proved easy to fix by tightening the Alt encoder lock. After fighting this for an hour and listening to the happy conversations of those observers around me I gave up on my normal eyepieces and went back to some older ones. This gave me some nice views of some of the lollipops and in between we were rewarded with a view of a very bright fireball which appeared heading west and brightening and then breaking up. The fireball did show some signs of orange and red.

As the evening progressed I did manage to get some of the systems sorted and was rewarded with some of the best views I have had of M82 showing really fine detail in the galaxy and some structure from the jets coming out. When we took an SQM reading which measures the sky darkness it showed 21.65 which is one of the best readings we have ever had for this location. Later on we managed another view of P/252 which was by then much higher in the sky and filled the view

even using a wider field 25mm 100 ES eyepiece. There did appear to be some tail structure but the comet is so diffuse with no nucleus that it was difficult to tell. I finished off with a view of M17 which had just risen before dawn and was amazed again with the amount of detail that could be seen so low down. At this point I noticed that the dew on the shroud had turned to ice, as it had on the telescope cover that I tried to put on. As I write this it looks like we will be out again Sunday night.

FURTHER DISCUSSION

Why not take a look at our website? It's at: www.abingdonastro.org.uk.

If you are not already on our internet mailing list, then why not log on to Yahoo Groups. The list is called 'abingdonas'. Members use the list to alert each other about celestial events and to chat about amateur astronomy. The list is quite active, with several messages most weeks. To read through previous messages click on:

<http://groups.yahoo.com/group/abingdonas/>.

To join the abingdonas list, please go to <http://www.yahogroups.com>. You can also unsubscribe from the list here.

To post messages to the list, please send them to abingdonas@yahogroups.com. Please note that you will need to sign up with a YahooID if you do not already have one. You can do this on the above page.

Further information about the mailing list can be found on the abingdonas webpage at:

<http://groups.yahoo.com/group/abingdonas/>.

DATES FOR YOUR DIARY

25th April 8pm Beginners' Meeting in the Main Hall. Talks to include Mars, Transit of Mercury and What's Up?

Mercury Transit: Monday 9th May – AAS public observing event on sports field adjacent to Abingdon United ground in Northcourt Road, Abingdon, 12 pm – 7.30 pm

Observing evening: None until the Autumn as it does not really get dark. Specials may be organised, so keep a look out on the AAS group mailing list.

The editor of "SpaceWatch" is Owen Brazell, who would very much appreciate your stories & contributions. In particular whilst many fine images are being posted on the discussion group it would be nice to have some in the SpaceWatch. Please send any news, observations, photos, etc. to:

Mail: Owen Brazell, 15 Spinage Close, Faringdon, Oxfordshire SN7 7BW

E-mail: owen@online.rednet.co.uk

STAR CHART

The night sky at 10 pm (BST) on Friday 15th April 2016

