

SPACEWATCH

the newsletter of the Abingdon Astronomical Society

Next Talk
11th May 2015
AGM +
Europe's Giant Impact Crater – Chris Holt

THE NIGHT SKY THIS MONTH

by Bob Dryden

Mercury: Having just passed through Superior Conjunction on 10th April, Mercury reappears in the evening sky. By 18th April the planet is already 10° at sunset and is setting itself an hour later. Shining at -1.5 magnitude Mercury should be quite easy to see at this time given a clear horizon. However, it does decrease in brightness after that, fading to -1.1 magnitude by 23rd April, and 0.0 magnitude by 7th May when it reaches Greatest Elongation (at 21° from the Sun). Following greatest elongation, fading increases rapidly so that by the end of this session on 11th May the magnitude is just +1.0. However, Mercury does gain altitude throughout most of this session. As Mercury will be crossing Taurus, it means that by May 7th, it is 18° above the horizon at sunset and you have another 2 hours after that before the planet reaches the horizon.

On 19th April the thin crescent Moon, Mars, and Mercury form a small triangle low near the horizon. Then on 22nd April Mercury will be approximately 1° east of Mars. Then on 1st May Mercury will be passing about 1° west of the Pleiades star cluster.

Venus: Things are improving nicely for viewing Venus as the elongation increases to 43° by mid May (after starting at 38°), and the apparent diameter reaches 18". Venus shines at -4.1 magnitude which means it is the brightest object in the night sky apart from the Moon. As the Sun sets on during this session Venus is at an altitude of around 33° which gives you nearly 4 hours to view the planet before it sets itself. The phase starts at as a large gibbous, but reduces towards half phase as the weeks pass. While Venus spends most of this session in Taurus, it does move into Gemini on 8th May.

In mid April the bright planet is beginning to move away from the Pleiades star cluster. On the evening of 21st April the thin crescent Moon will be approximately 5° west of Venus (the Moon will actually be very close to the first magnitude star Aldebaran).

Mars: You probably have no more than two weeks left of this Martian apparition before the planet disappears into the Sun's glare. Shining at just +1.4 magnitude, Mars is already close to the twilight zone as this session begins. It is 12° high at sunset and sets itself about 80 minutes later. By the 1st May it will be

setting just less than an hour after the Sun and given it's rather dim magnitude, it will probably be invisible to observers.

On 22nd April Mars will be next to the much brighter Mercury but it may be a difficult observation given their low altitude and proximity to the twilight sky.

Jupiter: Still in the constellation of Cancer, Jupiter shines brightly at -2.2 magnitude in the evening sky. As it goes dark on 13th April Jupiter is already 55° high in the south and does not set until 03.00 UT giving plenty of time to study the disc detail. By mid May, the planet will be more towards the south west as darkness falls and it will be setting by 01.00 UT.

Saturn: Saturn resides in Scorpius (around the top of the scorpions 'claw') which means its elevation is always going to be low. Presently rising around 23.00 UT, the planet culminates in the south at about 03.00 UT at a height of just 20° . Even though it is low, Saturn shines at +0.1 magnitude making it an easy naked eye target. You will see the rings in any small telescope as they are wide open at an angle of 24.5° . By mid May Saturn rises at 21.00 UT, culminates at 01.00 UT, and is close to the south western horizon by dawn.

Uranus & Neptune: Both of these planets are visible in the morning sky but they are not at their best. Uranus is slowly moving out from behind the Sun and by mid May it rises at approximately 03.00 UT which is an hour before the Sun. By sunrise it will be 10° above the horizon in Pisces, shining at +5.7 magnitude.

Neptune is further west, in the constellation of Aquarius. In mid April the planet rises at 04.00 UT and is around 10° high by sunrise. By the time we reach mid May Neptune is rising at 02.00 UT which is a good two hours before the Sun. Neptune will be 15° high in the south east by sunrise. Fainter than Uranus, Neptune is +7.8 magnitude and it will be visible in binoculars before the morning twilight arrives.

Asteroids: There are just two brightish asteroids on view at the moment but unfortunately one is in the morning sky, and the other does not rise until very late. 1 Ceres is in the news at the moment since a space craft has arrived at it, and if you want to see the dwarf planet then it is in the constellation of Capricornus. It starts at +9.0 magnitude and brightens to +8.7 magnitude by mid May.

2 Pallas is in Hercules, starts at +9.7 magnitude, and reaches +9.4 magnitude by mid May which is the brightest it is going to get this apparition.

Comets: Two comets that are above 11th magnitude are on view this session.

Comet C/2014 Q2 Lovejoy that many of us watched late last year is still observable, albeit quite faint now. It fades from +9.8 magnitude in mid April to +11.7 magnitude by mid May so this is your last chance to see it before large telescopes are required. Currently it is crossing Cassiopeia, and it moves into Ursa Minor on the 1st May.

The second comet is P/Borrelly 19P which starts in Cetus, before entering Aries on 4th May and then Taurus on 7th May. This one is brightening, but only reaches +9.8 magnitude by mid May, after starting this session at +10.2 magnitude.



M97 by Clifford Marcus – a nice challenge for April nights

MARCH PARTIAL SOLAR ECLIPSE

by Gwyneth Hueter

Partial solar eclipse, March 20th, 2015

I have not heard of any AAS members who got to see the total phase of this eclipse but those of us who congregated on Abbey Meadow in Abingdon had a memorable experience.

Society members were setting up well before the start of first contact at 8.35, but there were already quite a few people turning up. Local science society ATOM were also set up to help keep order and distribute and collect the 50 sets of eclipse glasses that we had provided.

Unfortunately there was a dull chill overcast but we were pinning our hopes on the weather forecast which said better weather was creeping in from the north. Oh how excited I was to hear Radio Oxford reporting that a patch of blue sky had been spotted in Deddington. Clifford was in the car at the time as I was giving him a lift.

8.35 came and went and still nothing, but with some imagination we were seeing the sky brightening to the north and before long we were seeing blue bits and getting quite excited. We were also being followed on Radio Oxford and Lily Mitchell, their roving reporter, was darting around and grabbed Ian for an interview.

By 9.00 the sky was misty and clearing and we had been getting some decent views of the Sun through the clouds. Decent enough to get some good pictures without filters. As we got nearer to the maximum phase (85% cover at 9.30), I did become aware of the temperature dropping. There was still a haze in the air, which never completely cleared. Experienced eclipse chasers (umbraphiles) will tell you of a change in the light quality as an eclipse creeps towards totality; I certainly noticed that peculiar metallic quality to the light that comes about as it reduces, but without the reddening that you get at sunrise or sunset. I was fascinated as always by this effect and my body had a great adrenaline rush. It seemed to think the eclipse would become total! (I wish)

By this time we had over 260 people come and join us, including some TV cameras which I had assumed belonged to BBC Oxford but later turned out to belong to ITV Meridian. The link to that is on our Facebook page. (Or google it) People turned up with colanders and makeshift pinhole cameras. The holes in the colanders were really too big to get a good effect but the pinhole cameras worked quite well. There was a simple solar viewer which worked well.

Those of us who set up telescopes were very busy at this point. Thanks to Ian and his Coronado PST, which picked up one solar prominence. Chris had his 6" reflector and Julian his 80mm refractor. Both were observing in white light.

Trevor set up a Herschel Wedge on his refractor (it is a prism that diverts most of the Sun's light away from the eyepiece). He also linked his camera to his laptop and that gave excellent live coverage via its 200mm telephoto lens. All impressive stuff (especially as Trevor's refractor had an aperture of just 66mm) but all we saw apart from the eclipse was one measly little sunspot! I'm surprised that we had so many aurora reports at around that time.

The weather kept improving as we moved out of maximum cover and the rest of the day went by in springlike sunshine. I'm sure Ian, Trevor and Chris slept well that evening.

NOTICE OF ANNUAL GENERAL MEETING

The Annual General Meeting for 2014/15 will take place on **Monday 11th May 2015** at All Saints' Methodist Church Hall, Dorchester Crescent, Abingdon at **8 p.m.**, and will be followed by a talk about the Ries crater, Europe's youngest impact crater.

Agenda

1. Apologies for absence
2. Minutes of the previous Abingdon AS AGM (held 12/5/2014)
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 2015/2016

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).

Chris Holt, Secretary, Abingdon AS

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 YahooGroups. 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

27th April 8pm Beginners’ Meeting in the Perry Room.

Observing evening FCN 20th-22th Apr at Frilford Heath – Note this will be the last Observing evening of the session as it does not get dark in May (astronomically speaking)

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 Spingale Close, Faringdon, Oxfordshire Sn7 7BW
E-mail: owen@online.rednet.co.uk

MOON PHASES:

April 2015						
Sun	Mon	Tues	Wed	Thur	Fri	Sat
29  Sun: 05:48 18:33	30  Sun: 06:46 19:35	31  Sun: 06:43 19:37	1  Sun: 06:41 19:38	2  Sun: 06:39 19:40	3  Sun: 06:36 19:42 Moon: 18:50 06:11	4  Sun: 06:34 19:43
5  Sun: 06:32 19:45	6  Sun: 06:29 19:47	7  Sun: 06:27 19:48	8  Sun: 06:25 19:50 Moon: — 08:31	9  Sun: 06:23 19:52	10  Sun: 06:21 19:53	11  Sun: 06:18 19:55 Moon: 01:56 11:01
12  Sun: 06:16 19:57	13  Sun: 06:14 19:58	14  Sun: 06:12 20:00	15  Sun: 06:10 20:02	16  Sun: 06:07 20:03	17  Sun: 06:05 20:05	18  Sun: 06:03 20:07
19  Sun: 06:01 20:08	20  Sun: 05:59 20:10 Moon: 07:11 22:25	21  Sun: 05:57 20:12	22  Sun: 05:55 20:13 Moon: 08:39 —	23  Sun: 05:53 20:15	24  Sun: 05:51 20:17	25  Sun: 05:49 20:18 Moon: 11:29 01:59
26  Sun: 05:47 20:20	27  Sun: 05:45 20:22	28  Sun: 05:43 20:23	29  Sun: 05:41 20:25	30  Sun: 05:39 20:27	1  Sun: 05:37 20:28	2  Sun: 05:35 20:30
3  Sun: 05:33 20:32	4  Sun: 05:32 20:33	5  Sun: 05:30 20:35	6  Sun: 05:28 20:37	7  Sun: 05:26 20:38	8  Sun: 05:24 20:40 Moon: — 08:55	9  Sun: 05:23 20:41

STAR CHART

The night sky at 10 pm (GMT) on Wednesday 15th April 2015

