

WAS News October 2024

Newsletter for the Wiltshire Astronomical Society

Wiltshire AS Contacts

Chairperson: Simon Barnes

Newsletter/Publicity : Simon Barnes

Treasurer and Membership: Sam Franklin

Speaker secretary: Position Vacant

Observing Sessions coordinators: Chris Brooks, Jon Gale,

Web coordinator: Sam Franklin

Contact the Society here:

Email: contact@wasnet.org.uk

Website url: <https://wasnet.org.uk/>

Follow our Facebook Page <https://www.facebook.com/Wiltshire-Astronomical-Society-154077261327030/>

Join the members only Facebook Group: <https://www.facebook.com/groups/wiltshire.astro.society/>

Committee Page: <https://wasnet.org.uk/committee/>

Upcoming Observing

Observing Sessions

1st attempt Friday 4th October
2nd attempt Friday 25th October

Start time 20:00 Hrs.

Location:

Red Lion Pub carpark SN15 2LQ
W3W - airbag.shudders.losing

Sign up to Observing Mailing List: <https://wasnet.org.uk/observing/>

Welcome to a slimmed down WAS News

Andy Burns has penned the WAS Newsletter for approximately 19 years, this is quite an achievement and a big task every month.

As you all know he has vacated the Chairperson position and alongside this he would like a rest from preparing the newsletter. Due to him being absent for 3 meetings, we have been nudged to prepare something in the interim. If the members are happy with this new format of 4 pages, we can keep it going forward. This will allow Andy his long-earned rest from doing this.

If you have suggestions to improve it as well as any observing reports and contributions will always be welcome.

Report from the Chair

As you will know, I have been voted in as Chairperson, thus relieving Andy Burns of the burden that he has been trying to unload for 6 years so he can focus on his health. I and on behalf of all members thank Andy for his sterling work for the last 10 years.

For those who do not know me, let me do a brief introduction. In 1995 I put and advert in Astronomy Now asking if anybody in the North Wiltshire area would like to contact me with a view to forming a local society. After publication I had 3 or 4 people contact me with great interest.

These included Phil Knight and Eric Winslow, Phil took up the role of Treasurer for several years. I took up the Chair position and served for about 9 years. Gradually the society grew with full meeting halls and eminent speakers like Dame Jocelyn Bell-Burnell.

Due to me taking over a company, and my decision to seek business in SE Asia, ultimately living in Thailand, I could no longer commit time to WAS. And this is when Andy stepped up to Chair having held the Vice-Chair position for 9 years. During his tenure the Society built up the observing meetings and these are now very successful, with great guidance from Jon Gale and Chris Brooks.

One of our stalwart members Bob Johnston who acted as Treasurer for a good number of years stepped down and Sam Franklin took over this role and is a great addition to the committee. Sadly, Bob passed unexpectedly not too long ago.

This brings us to today!

I look forward to the coming year of astronomy and another active year for the Society.

..Simon Barnes..

****Interested in Joining the Society? See <https://membermojo.co.uk/was/>

September Meeting Report

It was a little disappointing that only a handful of members turned out to participate in a useful discussion to discuss the future format of future meetings and share ideas and opinions.

Andy gave his final words as outgoing Chair together with some 'interesting' and amusing anecdotes. A vote was proposed and seconded to formalise Simon Barnes as the new Chair in accordance with the constitution.

It was agreed that a survey should be distributed to get a broad idea of the needs and wishes of the membership, regarding meetings format. The members Facebook was discussed and there some new ideas from Sam Franklin for a Google Group to allow interaction between members, and for astrophotographers, a Flickr account may be created. All members will be asked via a survey for their views on this new ideas. The survey may well have been issued at time of publication of this newsletter, if so, thank you for you input.

Meetings will be a mix of Zoom and in-person meetings.

An urgent requirement is for somebody to fill the position of Speaker secretary previously held by Peter Chappell. Peter did a fantastic job, This role benefits all members, as it is they that book all speakers whether it be zoom or in-person.

If you think you can help the society by becoming the speaker secretary, please contact one of the committee. The details of the role are shown at:

<https://wasnet.org.uk/wp-content/uploads/2023/06/society-roles-v1.1-2023-06-06.pdf>

The meeting closed with the usual tea and coffee and chat between members.

October 2024 Zoom Speaker: Martin Griffiths

Title: Exoplanets and Habitable Zones

Martin, a good friend of the Society, is an enthusiastic science communicator, lecturer, author and professional astronomer utilizing astronomy, history, culture and science fiction as tools to encourage greater public understanding of science.

He started his academic career as a lecturer in Astronomy for DACE at Swansea University in 1991 before becoming Senior Lecturer in Astronomy at the University of South Wales between 1999 and 2015. Martin is now a retired though he still takes an interest in Dark Sky Wales. He is Director of the Brecon Beacons Observatory and a Dark Sky Ambassador for the Brecon Beacons National Park. Martin is also a steering committee member of the Brecon Beacons International Dark Sky Reserve. He was selected by Cunard in 2019 to be an enrichment programme lecturer for their cruise ship fleet and in 2022 became a renaissance astronomy tour guide in Prague for New Scientist magazine .

He was a founder member of NASA's Astrobiology Institute Science Communication Group and is now a member of the NASA Astrobiology Science Communication Guild. Martin managed a multi-million pound ESF programme in Astrobiology for adult learners across Wales and he was also coordinator for ROSCOSMOS Russian Cosmonaut visits to the UK. In addition, he has been an adviser to several museum projects on the interface between science and science fiction, including exhibitions on the science of Star Trek and the Science of Aliens.

Martin has written and presented planetarium programmes for key stages 2 and 3 and presented planetarium shows for Dark Sky Wales. Martin is a Fellow of the Royal Astronomical Society; a Fellow of the Higher Education Academy; a member of the Astrobiology Society of Britain; a member of the British Astronomical Association; a member of the British Science Association; the Webb Deep-Sky Society; the Society for Popular Astronomy; The Astronomical Society of the Pacific and the Astronomical League. He is also a local representative for the BAA Commission for Dark Skies.

He was a consultant and broadcaster for BBC Wales radio and has appeared on science programmes for the BBC, Einstein TV, Granada TV and the Discovery Channel. He is also a member of the Honourable Society of Cymmrodorion, dedicated to promoting the science, arts and literature of Wales. Martin is also a member of the Welsh Academy, the National Society of writers in Wales. Beside his interest in astronomy Martin also enjoys history, literature, art, photography, walking, traveling, paddle boarding, reading and good red wine.

Moon Phases for October – with rise and set times.

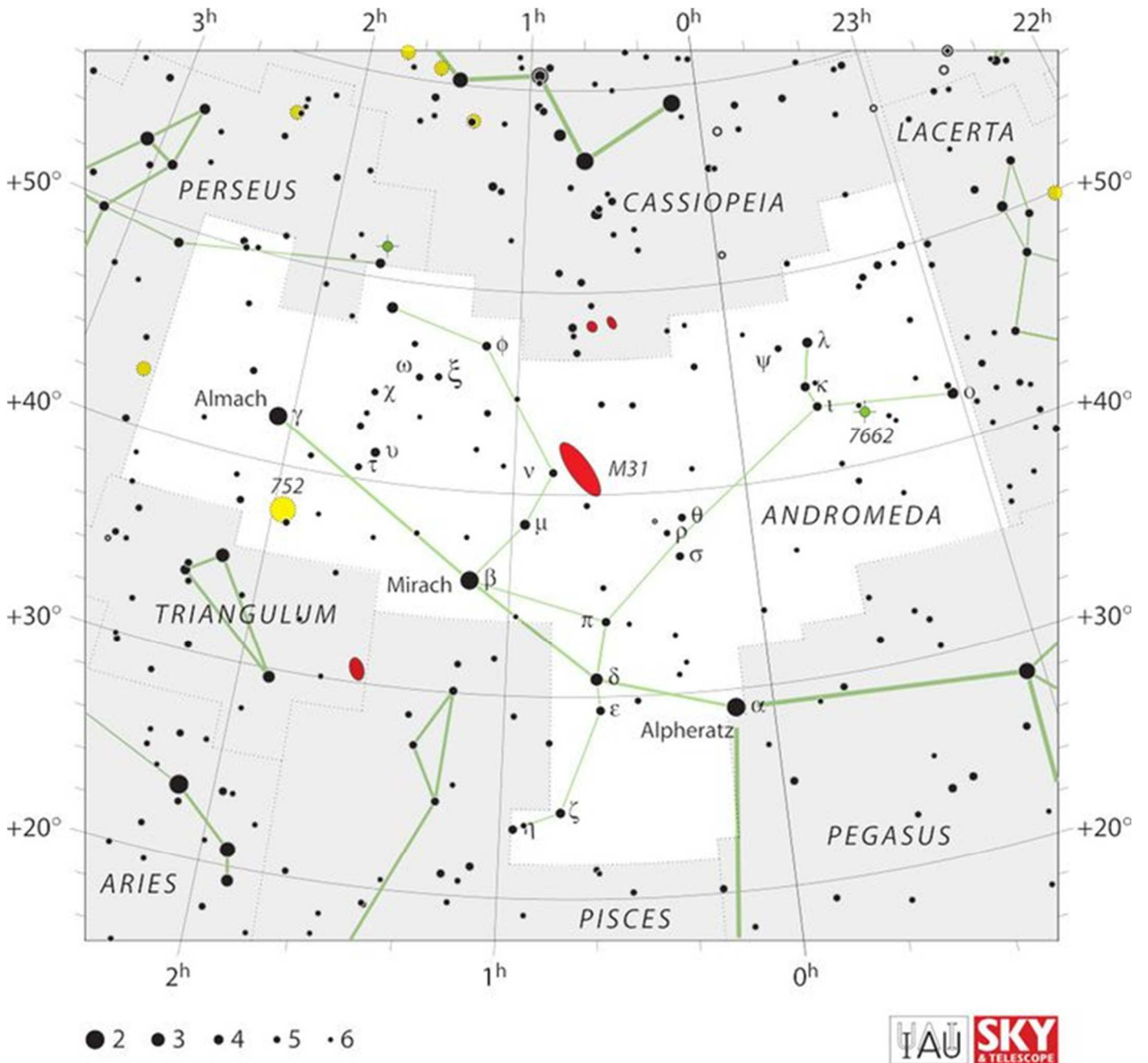
October 2024						
Sun	Mon	Tues	Wed	Thur	Fri	Sat
29 Moon: 03:13 18:07	30 Moon: 04:25 18:17	1 Moon: 05:38 18:27	2 Moon: 06:45 18:38 New Moon, 19:51	3 Moon: 07:55 18:46	4 Moon: 09:06 18:57	5 Moon: 10:18 19:11
6 Moon: 11:34 19:29	7 Moon: 12:48 19:55	8 Moon: 14:00 20:33	9 Moon: 15:01 21:27	10 Moon: 15:49 22:36 First Qtr., 19:57	11 Moon: 16:23 23:58	12 Moon: 16:47 -----
13 Moon: 17:06 01:27	14 Moon: 17:20 02:57	15 Moon: 17:34 04:27	16 Moon: 17:47 05:58	17 Moon: 18:01 07:31 Full Moon, 12:29	18 Moon: 18:18 09:05	19 Moon: 18:43 10:41
20 Moon: 19:17 12:12	21 Moon: 20:06 13:32	22 Moon: 21:11 14:32	23 Moon: 22:25 15:14	24 Moon: 23:44 15:42 Last Qtr., 09:04	25 Moon: ----- 16:01	26 Moon: 01:01 16:15
27 Moon: 02:14 16:26	28 Moon: 02:25 15:36	29 Moon: 03:35 15:46	30 Moon: 04:44 15:55	31 Moon: 05:55 16:05	1 Moon: 07:07 16:18 New Moon, 12:49	2 Moon: 08:21 16:36
3 Moon: 09:38 16:59	4 Moon: 10:50 17:34	5 Moon: 11:55 18:22	6 Moon: 12:46 19:26	7 Moon: 13:24 20:43	8 Moon: 13:51 22:07	9 Moon: 14:10 23:33

October Meteor Showers

Draconids - The peak is predicted for 0.03 UTC on October 8, 2024. The waxing crescent moon sets around 9pm local time, so will provide a moonless sky for observation. Rates can be around 10/hr.

Orionids - The peak is predicted for 18:14 UTC on October 20, 2024. The waning Gibbous moon will make observations difficult. Rates can be 10 – 20/hr.

Constellation of the Month Andromeda



Andromeda

As we move toward the Winter months, we welcome the winter constellations into the sky. Orion being one of the most glorious and always a target for imaging it's nebulae. But at first we will look at Andromeda. It is the 19th largest constellation. The Andromeda constellation consists of 16 stars. Andromeda is one of 48 constellations described by the Ancient Greek astronomer Ptolemy in 150 AD in his famous work "The Almagest." There are numerous exoplanets within Andromeda. One of the centrepieces of Andromeda is of course the Andromeda Galaxy, M31 in the Messier catalogue. Unlike other galaxies M31 is visible to the naked eye in non-light polluted skies. It has an apparent magnitude of 3.4. It is a spiral barred galaxy sitting at a distance approximately 2.5 million light years, and is the nearest neighbour to our own galaxy. Using a telescope or binoculars, it's possible to see the bright central core and possibly some of the extended features as well as the satellite galaxies, M32 and M110. To reveal the beautiful and extensive spiral arms, imaging is required. Due to its large angular size in the sky astrophotographers have to build a mosaic image to encompass all of M31 into one image. The galaxy is well placed for observation on the 2nd. It reaches its highest point around midnight and is visible all night.

If you draw an imaginary line from M31 to Mirach (β And, a red giant star at a mean Apparent Magnitude of 2.05) and continue through at about the same distance on the opposite side, there sits Messier 33 (M33) another spiral galaxy, with a more face on aspect. This is a part of the constellation of Triangulum. This is fainter than M31 and is really a telescopic object or even better a photographic object. It's also worthwhile to go to Perseus nearby and search for the Double Cluster NGC 869 and NGC 884 with binoculars.

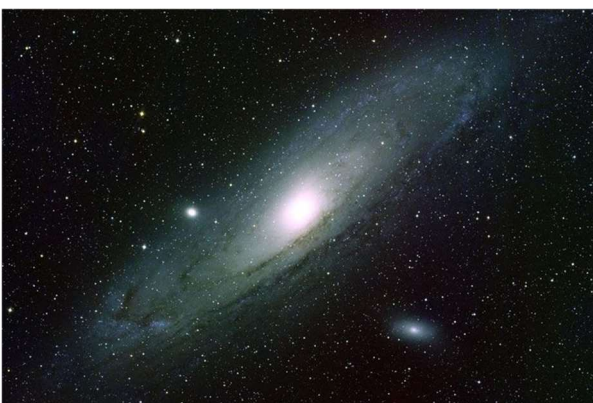
There are numerous other deep sky objects, and it is recommended to use a planetarium program or star map to locate their positions and their magnitudes. Many will require optical aid to view and astrophotographers will have some favourites.

Suggested planetarium programs:

Stellarium <https://stellarium.org> (Free)

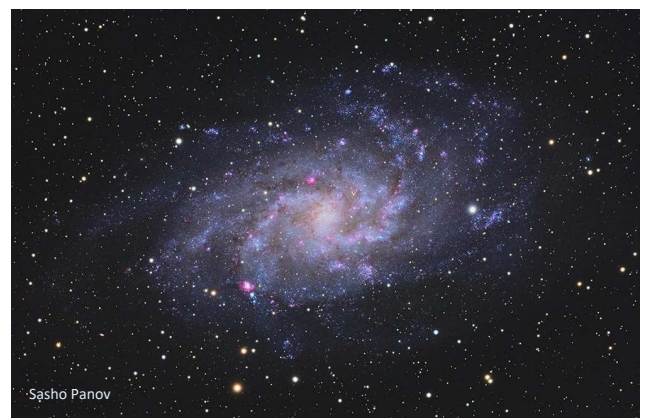
Carte du Ciel <http://www.ap-i.net/skychart/en/download> (Free)

There are several other free programs and a quick google search will find these for you. As well as these you can also find programs that require payment e.g., 'TheSky' from Software Bisque.



M31 with M32 and M110 satellite galaxies.

M33 in Triangulum



Planets for October 2024

Mercury and **Venus** will be too close to the Sun to observe this month.

Mars will be visible in the evening rising at approximately 23:10 **BST** early in the month (later in the month approximately 21:30 **GMT**), and in the morning the planet will be in Gemini at the start of the month and moving into Cancer at the end of October.

Jupiter is on display for most of the night traversing the southern sky, rising at 21.30 **BST** at the month start and 18.30 **GMT** by the end of the month. Jupiter can be found in Taurus.

Saturn will be low on the SE horizon, peaking high in the sky at midnight early in the month and around 20:30 **GMT** by month's end. It is occulted by the moon on the 14th. It is located in Aquarius.

Uranus will need to be viewed with binoculars or telescope as it is beyond naked eye visibility. It reaches the highest point in the southern sky at about 04.15 **BST** early October and by month end at 01.10 **GMT**. Look for it in the constellation of Taurus.

Neptune is also too faint to be seen with the naked eye and will need binoculars or a telescope to see. Looking to the southeast at sunset, it moves across the southern sky to set in the west just before dawn at the beginning of the month, and around 03:00 **GMT** at the end of the month. Find it between the constellations of Pisces and Cetus. Neptune will undergo lunar occultation on the 15th.

For further information about the current night sky, you can go to various web pages e.g., Sky and Telescope

<https://skyandtelescope.org/observing>

or the British Astronomical Society

<https://britastro.org/news/sky-notes>

Comet C/2023 A3 Tsuchinshan-Atlas

According to the BAA Comet Section Director Comet C/2023 A3 Tsuchinshan-Atlas maybe 'looking good for October'. It could be a challenge to see due to being low in the evening sky, but it may well be worthwhile keeping an eye on during October. I recommend to read the BAA notes which are very detailed.

https://britastro.org/section_news_item/comet-c-2023-a3-Tsuchinshan-atlas-looking-good-for-October

And the Sky at Night notes from Pete Lawrence

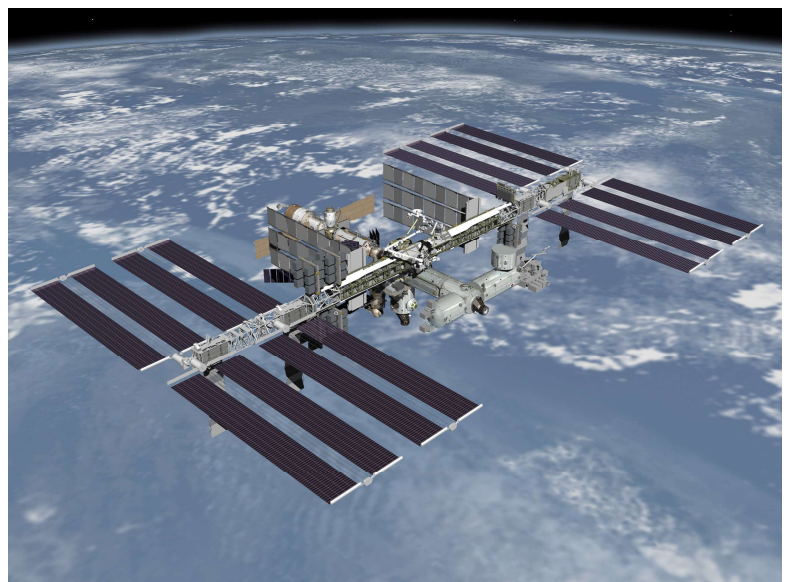
<https://skyatnightmagazine.com/advice/how-to-locate-c-2023-a3-Tsuchinshan-atlas>

International Space Station Visible Passes 3 October – 4 November 2024

Date	Brightness (mag)	Start		Highest point			End		Pass type		
		Time	Alt.	Az.	Time	Alt.	Az.	Time		Alt.	
03-Oct	-0.3	19:15:21	10°	SW	19:15:35	10°	SW	19:15:48	10°	SW	visible
17-Oct	-0.9	06:46:10	10°	S	06:48:20	16°	SE	06:50:30	10°	E	visible
18-Oct	-0.7	06:01:12	10°	SSE	06:02:16	11°	SE	06:03:21	10°	ESE	visible
19-Oct	-2.1	06:49:19	10°	SW	06:52:22	33°	SSE	06:55:26	10°	E	visible
20-Oct	-1.7	06:03:45	11°	SSW	06:06:18	24°	SSE	06:09:05	10°	E	visible
21-Oct	-1.4	05:19:52	17°	SSE	05:20:18	18°	SE	05:22:38	10°	E	visible
21-Oct	-3.3	06:53:25	10°	WSW	06:56:45	61°	SSE	07:00:04	10°	E	visible
22-Oct	-3	06:08:58	24°	SW	06:10:41	47°	SSE	06:13:56	10°	E	visible
23-Oct	-2.4	05:24:58	34°	SE	05:24:58	34°	SE	05:27:48	10°	E	visible
23-Oct	-3.7	06:58:02	10°	W	07:01:25	89°	SSE	07:04:47	10°	E	visible
24-Oct	-0.6	04:40:55	14°	E	04:40:55	14°	E	04:41:38	10°	E	visible
24-Oct	-3.8	06:13:59	33°	WSW	06:15:22	78°	SSE	06:18:44	10°	E	visible
25-Oct	-3.1	05:29:56	53°	ESE	05:29:56	53°	ESE	05:32:44	10°	E	visible
25-Oct	-3.7	07:03:00	11°	W	07:06:17	83°	N	07:09:40	10°	E	visible
26-Oct	-0.8	04:45:53	17°	E	04:45:53	17°	E	04:46:45	10°	E	visible
26-Oct	-3.8	06:18:57	34°	W	06:20:19	84°	N	06:23:41	10°	E	visible
27-Oct	-3.3	04:34:55	60°	E	04:34:55	60°	E	04:37:45	10°	E	visible
27-Oct	-3.7	06:07:59	10°	W	06:11:20	81°	SSW	06:14:41	10°	ESE	visible
28-Oct	-0.8	03:50:55	18°	E	03:50:55	18°	E	03:51:52	10°	E	visible
28-Oct	-3.8	05:23:59	32°	W	05:25:26	89°	N	05:28:48	10°	E	visible
29-Oct	-3.4	04:40:02	64°	E	04:40:02	64°	E	04:42:57	10°	E	visible
29-Oct	-3.3	06:13:08	10°	W	06:16:26	50°	SSW	06:19:41	10°	SE	visible
30-Oct	-0.9	03:56:07	18°	E	03:56:07	18°	E	03:57:07	10°	E	visible
30-Oct	-3.6	05:29:12	30°	W	05:30:40	64°	SSW	05:33:59	10°	ESE	visible
31-Oct	-3.4	04:45:22	62°	SE	04:45:22	62°	SE	04:48:17	10°	ESE	visible
31-Oct	-2.3	06:18:40	10°	W	06:21:32	26°	SSW	06:24:22	10°	SSE	visible
01-Nov	-0.9	04:01:36	18°	E	04:01:36	18°	E	04:02:34	10°	E	visible
01-Nov	-2.8	05:34:42	26°	WSW	05:35:55	35°	SSW	05:39:00	10°	SE	visible
02-Nov	-2.8	04:51:02	38°	SSE	04:51:02	38°	SSE	04:53:33	10°	SE	visible
02-Nov	-1.4	06:25:15	10°	WSW	06:26:35	12°	SW	06:27:56	10°	SSW	visible
03-Nov	-0.8	04:07:28	14°	ESE	04:07:28	14°	ESE	04:08:02	10°	ESE	visible
03-Nov	-1.9	05:40:34	16°	SW	05:41:09	17°	SW	05:43:25	10°	S	visible
04-Nov	-1.6	04:57:08	18°	S	04:57:08	18°	S	05:58:26	10°	SSE	visible

The above data is based on location data for Seend, the Heavens Above web pages. If you need accurate data for your location please go to: <https://www.heavens-above.com/>

You can also find prediction orbit data for other orbiting vehicles there too.



Selected Space Flight News

NASA's Webb Provides Another Look Into Galactic Collisions:

Smile for the camera! An interaction between an elliptical galaxy and a spiral galaxy, collectively known as Arp 107, seems to have given the spiral a happier outlook thanks to the two bright "eyes" and the wide semicircular "smile."

<https://science.nasa.gov/missions/webb/nasas-webb-provides-another-look-into-galactic-collisions/>

65 Years Ago: First Powered Flight of the X-15 Hypersonic Rocket Plane:

The X-15 hypersonic rocket-powered aircraft, built by North American Aviation (NAA), greatly expanded our knowledge of flight at speeds exceeding Mach 6 and altitudes above 250,000 feet. A joint project among NASA, the U.S. Air Force, and the U.S. Navy,...

<https://www.nasa.gov/history/65-years-ago-first-powered-flight-of-the-x-15-hypersonic-rocket-plane/>

Reinventing the Clock: NASA's New Tech for Space Timekeeping:

Here on Earth, it might not matter if your wristwatch runs a few seconds slow. But crucial spacecraft functions need accuracy down to one billionth of a second or less. Navigating with GPS, for example, relies on precise timing signals...

<https://www.nasa.gov/technology/goddard-tech/reinventing-the-clock-nasas-new-tech-for-space-timekeeping/>

Space X continue their successful flights with another privately funded mission in their Dragon spacecraft. As part of their mission, 2 crew members did a short 'Spacewalk' to test out the new EV suits. Funder and Billionaire Jared Isaacman as commander of the flight, took first turn to venture out of the top hatch of 'Polaris Dawn': After his 15-minute venture outside he returned inside the spacecraft and other crew member Sarah Gillis (a Space Engineer) took a similar 15 minute venture out of the hatch. The 5- day mission has had conspiracy theories clouding their successful flight, conspiracists have suggested the spacewalks were faked because the images look to good. This is a downside of the super images that were sent back to earth during the ventures outside. As with all space conspiracy theories, why would they fake such a thing!

NASA and SpaceX teams have adjusted the next launch opportunity for NASA's **SpaceX Crew-9** mission to no earlier than 1:17 p.m. EDT, Saturday, Sept. 28, from Cape Canaveral Space Force Station in Florida due to expected tropical storm conditions in the area. This is the spacecraft that will return the so-called ISS stranded astronauts Suni Williams and Butch Wilmore. If all goes to plan the crew will already be on station at the ISS as you read this.

Space X continues to gear up toward a flight of their massive Starship launch vehicle. After their spectacular Flight 4, we will see what ambitious plans will be realized for flight 5. It is understood that Space X is awaiting final approval from the FAA for the flight to go ahead. Space X commented that it takes longer to get government paperwork to launch a rocket than it does to design and build the hardware. Late November may well be the launch date based on the FAA estimate to give the approval.

Blue Origin successfully completed its eighth human spaceflight and the 26th flight for the New Shepard program. The astronaut crew included: Nicolina Elrick, Rob Ferl, Eugene Grin, Dr. Eiman Jahangir, Karsen Kitchen, and Ephraim Rabin. Including NS-26 crew, New Shepard has now flown 43 people into space (sub-orbital).

The crew of the **Chinese space station Tiangong**, continue with activities including emergency drills despressurisation as well as medical and industry experiments.

<https://www.yahoo.com/news/chinas-astronauts-conduct-emergency-drills-150001515.html>



Final Thoughts

I have not received any observing logs or photos from any members. It would be a nice addition to for the newsletter if people can submit their observing logs or photos for inclusion.

If there are sections you would like including, please let me know. Please use the contact email address as shown at our web page.

I hope the weather changes and we get a good winter of observing and imaging. Equipment continues to improve and simplify imaging, this brings more people into amateur astronomy. Our observing sessions at Lacock continue to be very popular.

Please give thought to helping our small committee, we still have key role of Speaker Secretary to be filled. For hall meetings a helping hand to make the tea and coffees will be greatly appreciated.



Bob King