oasi.org.uk

No. 617 Registered Charity 271313 November 2024

OASI News

The newsletter of Orwell Astronomical Society (Ipswich)

Nigel Evans. Frame from IMX291 Meteor Camera from 10th October 2024

Trustees: Mr Neil Morley Mr David Payne

Honorary President: Dr Allan Chapman D. Phil MA FRAS

Table of Contents

Society Notices

Dear Members,

Our Open Evenings at Orwell Park, at the end of October, were successful. Unfortunately the weather was generally cloudy, with only a brief spell of clear skies, early on the Saturday evening. As a consequence, the number of visitors was low, but those who did attend were treated to a more personal tour of the Observatory and the telescopes on the field. I would like to thank all members, who gave up their free time to help out at this important outreach event.

It was great to see a good number of images of Comet C/2023 A3 (Tsuchinshan ATLAS), submitted by members of OASI. It reached naked eye visibility and was observed during our meeting at Newbourne on Monday 14th October. We have oppositions of Jupiter and Mars coming up in December and January, so if the skies do finally decide or clear, there are plenty of fine sights to observe in the coming weeks!

Andy Gibbs, Chairman.

Committee 2024

Chairman	Andy Gibbs	Set overall agenda for OASI, Chair committee meetings, Press and publicity
Secretary	Roy Gooding	Outreach meetings (jointly with Chairman), observatory decoration
Treasurer	Paul Whiting	Finance, Supervision of applications for grants. Visits by outside groups, Observatory tours, public appreciation of astronomy, Outreach activities
Committee	James Appleton	Committee meeting minutes, Web site
	Martin Cook	Membership, Tomline refractor maintenance & user testing
	Matt Leeks	Safety & security
	Peter Richards	Lecture meetings
	John Wainwright	Equipment curator
	Mike Whybray	Astronomy Workshops, Child protection officer, Orwell Park School Astronomy Club
	Andy Willshere	Librarian
	Adam Honeybell	Newsletter
	Paul Whiting	OASI @ Newbourne

Committee Meeting

The next Committee Meeting will be on Friday 29th November at 8:00pm via Zoom. All members welcome.

New members

Dewald Fourie
Anthony Hood

Society Contact details

Website:	https://www.oasi.org.uk
Events:	https://www.oasi.org.uk/Events/Events.php
Email queries:	info@oasi.org.uk
Submissions for Newsletter:	news@oasi.org.uk
Members-only message board:	https://groups.io/g/OASI
Observatory (meeting nights only):	☎ 07960 083714

Social Media

For other astronomy news and astro pictures try our socials:

Facebook:	https://www.facebook.com/groups/445056098989371
YouTube:	https://www.youtube.com/@orwellastronomical425

Articles for OASI News

News, pictures and articles for this newsletter are always welcome.

Please send tables as separate files in one of these formats (Excel, .csv, OpenOffice)

If you don't feel up to writing a major article, perhaps you might write a short note for OASI News along the lines of "This month I have mostly been observing/constructing/mending/reading/etc."

Please send material for the OASI web site and newsletter e.g., observations, notices of events, general interest articles, to news@oasi.org.uk

The CLOSING date is the **15th** day of the month (i.e. 15th November).

The Newsletter archive is at www.oasi.org.uk/NL/NL_form.shtml

Authors, please note that your articles will be publicly available worldwide!

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Meetings and events

We have regular meetings on the 2nd and 4th Monday of the month (usually) at **Newbourne Village Hall**, and every Wednesday at **Orwell Park**. Night sky observing will usually take place when the skies are clear.

Date, Time & Location	Contact	Event
Weekly, every Wednesday, from 20:00 Orwell Park Observatory, Nacton	Martin Cook Roy Gooding	Observatory open
Thursday 21st November 20:00 Zoom	Paul Whiting	Monthly Zoom meeting.
Monday 25th November 19:30 Newbourne Village Hall	Paul Whiting	Newbourne meeting - beginners and new members welcome! Sky Notes by Bill Barton, FRAS. Astro News by Paul Whiting, FRAS.
Friday 29th November 20:00 Zoom	Andy Gibbs	Committee meeting via Zoom. All members are invited to attend.
Monday 2nd December 19:30 Orwell Park Observatory, Nacton	Paul Whiting,	Taster evening. Places **must** be booked in advance by email: tour@oasi.org.uk.
Thursday 5th December 20:00 The Fox Newbourne	Roy Gooding	The Society's main pre-Christmas social event is the annual Christmas Meal

OASI @ Orwell Park

There are regular meetings every Wednesday evening from 8pm. Access is controlled by a gate and a fob. The entrance is gate 2 is on Church Road, What3Words is **tour.fuse.banks**

Access into the School Grounds and Observatory Tower

The route is as follows:

• Enter through gate 2 (gate 1 being the main gate) and park inside as per the attached map.

• Enter the school through the double black doors as indicated on the map. A key fob will be required to open the door.

• Continue straight through the next two sets of double doors.

• Turn left at the end of the short corridor then immediately right.

• Pass through the single door and on your left you will find the staircase leading to the observatory.

• On no account must you deviate from this route.

When leaving the observatory use the same route but in reverse. Please keep noise to a minimum as there are staff quarters nearby.

OASI @ Newbourne

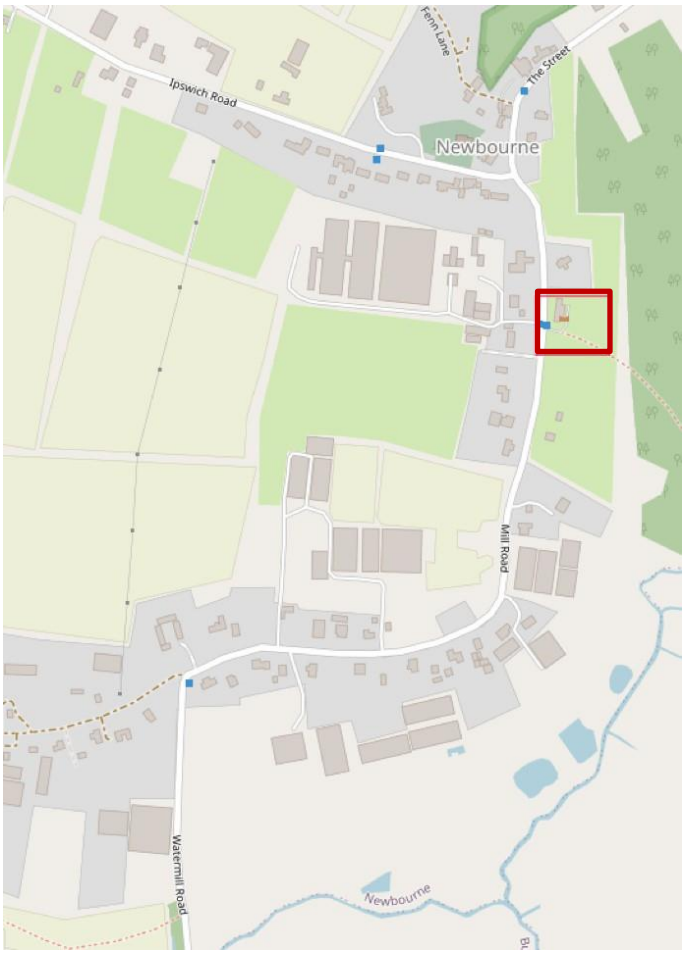
newbourne@oasi.org.uk

We meet at Newbourne Village Hall, Mill Lane, IP12 4NP on the 2nd and 4th Mondays from 19:30.

What3Words **scars.atlas.printing**

Visitors are welcome but we do ask you to join the Society after two visits.

http://www.oasi.org.uk/OASI/Membership.php



Newbourne dates for 2024		
December	09 (Q)	

We open up for all meetings at 7:30pm.

Astro News (A) / Star Guide (S) at 7:45pm followed by any Talks (T), Workshops (W) and occasional Quiz (Q).

# indicates a change to the normal monthly pattern.

Forthcoming Outreach Programmes 2024

All members are welcome to come along and help out at these events – you don't need to be an expert in the subject. Just respond to the email call for help prior to the event.

Please note that not all events are open to the public.

No events currently scheduled.

OASI and BAA Events

For the latest event details, please check our website and social media.

BAA news & webinars

For full details of all meetings or cancellations, please go to https://britastro.org/events/future-events

The BAA Radio Astronomy Section

The BAA Radio Astronomy Section have been enjoying talks, seminars and tutorials via Zoom and these are available on the BAA YouTube channel https://www.youtube.com/user/britishastronomical/playlists.

The Night Sky in November

All event times are for the location of Orwell Park Observatory 52.0096°N, 1.2305°E. Times are **GMT** unless otherwise stated.

Sun, Moon and planets

Sources: http://heavens-above.com/PlanetSummary.aspx http://heavens-above.com/moon.aspx

November 2024

Object	Date	Rise	Set	Mag.	Notes
Sun ☉	1	06:51	16:26		
	31	07:40	15:48		
Moon ☽	1	06:52	16:02		Perigee: 14 November 11:16 Last Quarter: 23 November 01:28 Apogee: 26 November 11:57 New Moon: 01 December 06:22 First Quarter: 08 December 15:27
	31	07:10	14:45		
Mercury ☿	1	08:52	16:48	-0.2	
	31	08:52	16:18	1.6	
Venus ♀	1	10:38	17:51	-3.9	
	31	11:11	18:33	-4.0	
Mars ♂	1	21:11	13:18	0.1	
	31	19:49	11:50	-0.5	
Jupiter ♃	1	18:19	10:34	-2.5	
	31	16:13	08:25	-2.7	
Saturn ♄	1	14:54	01:25	0.8	
	31	13:00	23:27	1.0	
Uranus ♅	1	16:58	08:28	5.6	
	31	15:01	06:27	5.6	
Neptune ♆	1	15:13	02:51	7.8	
	31	13:18	00:55	7.9	

Occultations during November 2024

https://iota-es.de/moon/grazing_descrx101.html and
http://www.lunar-occultations.com/iota/bstar/bstar.htm

Observers are encouraged to download and install the Occult software program [Windows only] to generate predictions for their own particular site coordinates.

Meteor showers during November 2024

Shower	Normal limits	Maximum	ZHR at Max	Notes
Leonids	6-30 November	18 November	10	Fast bright meteors with fine trains. Associated with Comet Tempel-Tuttle
Geminids	4-20^{h} December	14-15 December	150	Fast with fine trains. Associated with Comet Halley

See also https://www.rmg.co.uk/stories/topics/meteor-shower-guide

For radio observation, use reflections from Graves Radar on 143.049MHz or the Brams transmitter in Belgium on 49.97MHz and UK GB3MBA on 50.408MHz https://www.ukmeteorbeacon.org/Home

See also https://www.popastro.com/main_spa1/meteor/radio-meteor-observing-2020/.

Comets

Source : https://heavens-above.com/Comets.aspx on 02/10/24.

Comet	Brightness	Date of last reported observation	Angular separation from Sun	Constellation
C/2023 A3 Tsuchinshan-ATLAS	8.4	2024-Nov-19	52°	Serpens
C/2024 G3 ATLAS	11.8	2024-Nov-04	23°	Lupus
29P Schwassmann-Wachmann 1	12.1	2024-Nov-12	87°	Leo
37P Forbes	12.3	2024-Oct-31	45°	Sagittarius
333P LINEAR	12.8	2024-Nov-15	74°	Leo
C/2024 B1 Lemmon	13.1	2024-Nov-01	53°	Boötes
C/2023 C2 ATLAS	13.4	2024-Oct-31	45°	Sagittarius
C/2022 E2 ATLAS	13.6	2024-Nov-17	129°	Camelopardalis
487P SidingSpring	14.5	2024-Nov-11	156°	Perseus
C/2019 U5 PANSTARRS	15.2	2024-Nov-01	95°	Puppis
C/2022 N2 PANSTARRS	15.2	2024-Nov-17	102°	Aquarius
C/2020 V2 ZTF	15.3	2024-Nov-17	67°	Pavo
C/2017 K2 PANSTARRS	15.4	2024-Nov-10	145°	Orion
C/2024 J2 Wierzchos	15.4	2024-Nov-03	58°	Hercules
130P McNaught-Hughes	15.5	2024-Nov-11	151°	Pisces
C/2024 M1 ATLAS	15.6	2024-Nov-12	137°	Monoceros
C/2022 QE78 ATLAS	15.8	2024-Nov-12	132°	Monoceros
P/2012 US27 Siding Spring	15.9	2024-Nov-05	156°	Perseus
472P NEAT-LINEAR	16	2024-Nov-10	136°	Monoceros

Visible ISS passes >30º max altitude for November 2024

Source: http://heavens-above.com/PassSummary.aspx?satid=25544

Times are **GMT**.
Predictions are approximate (02/10/24) due to craft adjustments. Check the day before.

Date	Brightness (mag)	Start			Highest point			End		
		Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az
20-Nov	-2.4	16:43:04	10°	SSW	16:46:04	30°	SSE	16:49:05	10°	E
20-Nov	-3.3	18:19:11	10°	WSW	18:22:05	61°	SW	18:22:05	61°	SW
21-Nov	-3.6	17:30:48	10°	WSW	17:34:10	64°	SSE	17:35:34	31°	E
22-Nov	-3.2	16:42:28	10°	SW	16:45:45	51°	SSE	16:49:00	10°	E
22-Nov	-3.3	18:19:01	10°	W	18:21:54	61°	W	18:21:54	61°	W
23-Nov	-3.8	17:30:31	10°	W	17:33:55	83°	S	17:35:18	33°	E
24-Nov	-3.6	16:42:00	10°	WSW	16:45:23	75°	S	16:48:41	11°	E
24-Nov	-3.2	18:18:43	10°	W	18:21:34	59°	WSW	18:21:34	59°	WSW
25-Nov	-3.8	17:30:08	10°	W	17:33:32	85°	S	17:34:57	32°	E
26-Nov	-3.7	16:41:31	10°	W	16:44:55	86°	S	16:48:19	10°	E
26-Nov	-3.1	18:18:15	10°	W	18:21:13	52°	SW	18:21:13	52°	SW
27-Nov	-3.6	17:29:36	10°	W	17:32:58	69°	SSW	17:34:38	27°	ESE
28-Nov	-3.7	16:40:54	10°	W	16:44:18	80°	S	16:47:41	10°	ESE
28-Nov	-2.4	18:17:43	10°	W	18:20:48	33°	SSW	18:21:00	33°	SSW

Bill Barton's Radio Broadcast

ICRFM (Ipswich Community Radio) 105.7 MHz at about 08:25 in the morning of the first Wednesday of each month. I aim to cover what there is to see in the sky and then a little bit on something topical. ICRFM is also available to listen to over the Internet and there is a listen again option on their website. http://www.icrfm.com

Tribute to Roy Adams

By Neil Morley

Kind, modest, approachable, environmentally conscious, compassionate, knowledgeable, an eye for fine detail, not short of a word or two (not to mention three!), a producer of long and detailed reports. These are things I think of when describing Roy. He could also be enigmatic, dogmatic and determined, when he felt he wasn't being taken seriously. We all have our own memories of him.

Roy joined Orwell Astronomical Society (Ipswich) in the mid 1970s and became involved with newsletter production. His sketch of the Tomline refractor appeared on the front cover. In an era before modern computers, he generated micro-typed editions. Notably they were all error free! Roy purchased a dry photocopier and assisted with production. He contributed many articles including a multi-part epic with interesting views on restoring the original water-powered hydraulic lift at Orwell Park observatory. Detailed observation reports between the 1970s and 1990s included comets and sunspot sketches.

In 1979, Roy used Meccano parts to construct a mount and drive for his 60 mm refractor. Quoting Roy, *I initially constructed the clutch from two back-to-back rubber-tyred Meccano pulleys, but this did not provide adequate friction. Slipping in two discs of industrial sandpaper between the pulleys provided an easy solution.*
Unusually for a member of an astronomy society, Roy maintained an active interest in UFOs. The June 1978 Newsletter featured a UFO Hotline! To spread "knowledge" of the subject, Roy arranged a couple of talks for the society and built up a library of books at home. I never found out whether he had encountered a UFO but have no doubt that, had he done so, he would have offered the crew breakdown assistance using Meccano parts!

Roy's Friends of the Earth credentials were well known to members of OASI. In the 1970s, he was involved in an innovative but ultimately unsuccessful campaign to construct a road tunnel under the River Orwell before the road bridge was built. In the 1980s, he led a campaign to ban stubble burning and, in 1993 was proved right when the practice was outlawed.

Roy became a Trustee of OASI in 1978. After I joined the society in 1992, my first memory of Roy was of him presenting the trustees' report at the AGM. He always produced detailed and beautifully handwritten reports on two sheets of A4, the quality of which would have made the Brontë Sisters proud. It was every Chairman's nightmare because, if Roy were allowed to read the report in its entirety, it could easily take the best part of half an hour, if not longer. A highlight was his sketch of the Tomline refractor showing the torque measurements using a spring balance with the scope aligned to different compass bearings. *The movement seemed stiffer this year!* On one occasion, Roy and the other trustees reported that the drive mechanism of the Tomline refractor looked like it had not been lubricated for some time. It took a huge amount of persuasion to convince them that an invisible dry lubricant had been applied instead! Roy reported with regularity on areas that had become untidy, most typically the storage room at the foot of the stairs, and the status of the fire extinguishers.

The last survey of Orwell Park Observatory that I attempted to undertake with Roy as a fellow trustee was in the summer of 2019. Unfortunately, we could not get in to the Observatory due to the school security system. I became a little worried when Roy said he was prepared to scale some gates at the back of the school to look for someone to let us in. He took some persuading that it would be best if we both left and returned another day!

Not long after the aborted survey, Roy was admitted to Ipswich hospital. Subsequent lockdown restrictions the following year prohibited hospital visits for four months. Having been discharged, Roy needed round-the-clock care at home. We must pay special tribute to Merlyn who looked after him around the clock and the carers and other professional staff who visited him on a regular basis.
Right to the very end, Roy maintained an active interest in OASI and always enjoyed receiving printed copies of the Newsletters. A conversation could easily cover multiple topics in a relatively short time. I can recall at one moment Roy was discussing the conflict in Ukraine which made him visibly emotional. Then in the next sentence he would be trying to recount how to remove the object glass from the transit telescope at the observatory preferably without breaking it!

A little known fact concerning Roy is that he was fluent in Brummy having spent time in the city. As a native speaker I can say I was impressed, and can attest that he fully understood all the words that I came up with to test his proficiency, including "ardu" (hello), "bostin" (smashing), tarrar-a bit" (bye), "bison" (basin).

I feel extremely privileged to have known Roy. I am sure you will join me in saying may he rest in peace, and wishing him a great final voyage among the stars.

Orwell Park Observatory Open Evenings

Adam Honeybell and Andy Gibbs

On Friday 25th and Saturday 26th October the society held an open evening for the public, Celebrating the 150th anniversary of the commissioning of Orwell Park Observatory. Unfortunately, the weather did not play ball over the two nights, with the clouds only parting briefly to allow observations of the night sky. This kept the number of visitors to a low level, but those who did attend enjoyed a more personal tour of the Observatory, with much positive feedback received. However, we did have around 38 visitors, and 1 new member.

I did manage to get a quick glimpse of Saturn through a break in the clouds for around 10 minutes, so was able to show this to a couple of visitors, who were suitably impressed. I was also able to show Mizar in Ursa Major, since it's a binary star, but doesn't appear so to the naked eye.

Top image: Ursa Major over Orwell Park
Bottom image: Mike Mahoney setting up his telescope.

Christmas Anagram fun.

Andy Willshere

Each of the following questions has a one word answer.

Take the first letter of each answer, giving eight letters. Unscramble these, to give an eight letter word.

A clue to help find the word: ‘ a layer of loose rock, stones and dust.

1. Surname of the astronomer who established the existence of galaxies.
2. Electromagnetic radiation with wavelength longer than that of visible light.
3. Doughnut shaped object like an ‘O’ ring.
4. A regular repeating path that one object in space takes around another.
5. Quantity of emitting light.
6. Lengthening of wavelengths of spectral lines.
7. An attractive force exerted between two or more objects that have mass.
8. An elementary particle 1/200 the mass of a proton.

Artificial Intelligence and Astronomy.

A short article from the OASI library.

Andy Willshere.

About a year ago an article about artificial intelligence and quantum computers appeared in the OASI magazine. It was suggested that A.I. and quantum computers were the way for the future. The former as a technology that is rapidly changing and will probably influence the future of all human life, the latter controlling the speed of resolution.

I thought that as A.I. has become a construct for time ahead, perhaps a short article that demonstrated some aspects of how astronomy and A.I. were symbiotic, would be interesting.

How intelligent can A.I. get? Can we program cognition? Manufacturing a fully intelligent A.I. system with a procedural memory is perhaps well into the future, especially when you consider the complexity of the human brain, with its cells and chemicals. Sentience can refer to the capability to experience for example, feelings, emotions, irritation and inquisitiveness. However, an A.I. designing another A.I. may get closer than we think, although to become sentient could be a step too far.

In order to fulfil our A.I. wishes, we require, much faster computational ability. Today this would entail the coupling of many super fast computers together, which would probably not be fast enough. We now arrive at the quantum computer, which is still partially in its theoretical stage, but advancements in this science are becoming rapid.

Today's astronomy supplies vast sets of data that require analysis. These data sets originate from for example, ground-based observatories, space telescopes, photography and other astronomical methods. Any raw data analysis performed solely by humans is inherently slow, especially as many analytic processes have to be performed to reach the final answer. It is here that A.I. is furnishing now and will into the future, computational interpretation of huge amounts of intricate data. Automation techniques provided by A.I. will allow scientists more time to understand complex issues. One of these techniques is spectral analysis, which measures the electromagnetic spectrum of the data acquired. From the analysis obtained, scientists can research the structure, temperature and physical characteristics of astronomical bodies relative to their spectral signatures.

Another of these analytic techniques is time-domain. This is the study of how astronomical objects alter with time. This method is used mainly with variable objects situated past the Solar System, such as pulsating stars, supernova and active galactic nuclei. These changes over time could be due to activity or modifications in the astronomical subject itself.

For the data obtained from just these few techniques, human evaluation multiplied by technological restrictions would simply take far too long and therefore A.I. algorithms and computers are essential to rapidly evaluate the mass, complexity and diversity of data.

Over recent years the role of A.I. in astronomy has grown notably, transforming the speed of analysis and interpretation of immense quantities of data. Two specific A.I. algorithms that perform a critical function of analysing time –series data, spectra and images are identified as 'machine learning' and 'deep learning'. These two are sometimes linked with neural networks. The difference between the two depends upon how the algorithms learn. Machine learning permits the machine to learn independently from past data, allowing it over a period to gain more accuracy and by definition more efficiency. Deep learning is a sub-group of machine learning that centres on using neural networks. It is able to execute tasks such as categorize, grade and regression analysis.

Neural networks are comprised of arrangements of artificial neurons which are occasionally described as perceptrons,(discovered 1958), which is a classifier that analyses input values and then outputs the specific class the input belongs to. A classifier arranges classes according to communal characteristics. The inputs are vetted by an activation function, which will decide just like the brain's neurons whether to fire or not. In the case of the perceptrons the output is a binary 0 or 1, which is simplified as true or false. Perceptrons, like neurons are capable of learning from examples, and thus increasing their ability to upgrade precision. During the period between 1960 t0 1970 they were used in solving uncomplicated puzzles, but with development from the 1980's algorithms with multi-layer neural networks became very useful in machine learning.

What benefits will A.I. provide.:

Automation.

Decrease human error.

Execute repetitive work.

Precise and rapid.

Assuming a power source, A.I. is always accessible.

Swiftly analyze massive amounts of data.

Depending upon algorithm, can analyse different types of data, from mathematical to pictorial.

Assist in discovering exoplanets, and predict cosmic events.

As A.I. technology is advancing, its use in astronomy will become more universal allowing scientists to make many enlightening discoveries and a much deeper comprehension of our universe.

References:

AI to aid future exoplanet hunt | Space

Discovering exoplanets using Artificial Intelligence

Analysis: How AI is helping astronomers study the universe | PBS News

(PDF) AI-Assisted Astronomical Data Analysis Unveiling Patterns and Phenomena in the Universe.

More precise understanding of dark energy achieved using AI | UCL Astrophysics Group - UCL – University College London

Aurora Observations on Thursday October 10th 22:49-23:30 UT

Neil Morley

Lynne and I had entertained a couple of visiting musician friends at home during the afternoon. We drove to the Henley Cross Keys to participate in the fortnightly folk club evening after an evening meal. I thoroughly recommend the excellent Ghanaian curries served by the resident Ghanaian chef! The event finished around 22:00 UT (23:00 BST) and outside in the car park we noted an especially clear sky. I thought there was a possible hint of a greyish glow towards the North. Was this a sign of things to come?

After returning home, we checked our phones and had received warnings of possible auroral activity from Ipswich. Using the “Aurora” Android APP on my Motorola G31, my best recollection is a KP index around 7 and Bz around -30 at 22:20 UT. It was certainly worth a try!

Having wrapped up warmly, we proceeded outside at 22:30 UT. I took several photos towards the North. After some experimentation, the following combination worked best:

1. Using “Night mode” within the camera APP to generate brighter albeit noisier images.

2. Securing the phone against the roof of Lynne's car to reduce camera shake.

3. Using the native camera auto enhancement feature to further highlight colours and structures within saved photos.

The first observing location chosen was diametrically opposite my house facing a path way between neighbouring houses. This provided a clear view of the top of the Rendlesham mast sited ~12 miles to the North. The greyish glow in the Northern sky was confirmed at 22:49 UT.

I returned to my driveway for the remainder of the observing session. At 22:58 UT, the bottom edge of the arc become less diffuse giving the appearance of a curtain-like structure. The curtain started to wave!

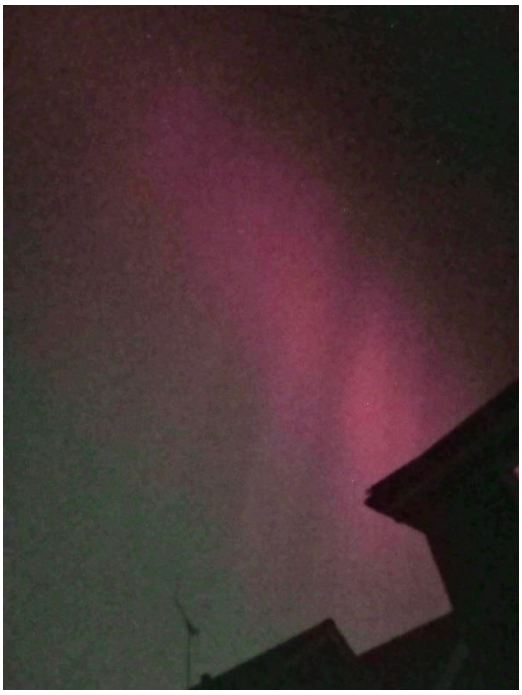
From 23:13 UT the entire sky erupted into vibrant colours, with constantly changing structures. Using my naked eye, I perceived red in particular against the star-cladded sky. There were fire-like structures, streamers and columns, all constantly changing. Lynne alerted me to a red glow in the North Western sky above my opposite neighbour's house which gave the appearance of a roof fire! After 23:30UT, the activity diminished and Lynne returned indoors. I continued monitoring the sky for a further 10 minutes then returned indoors.

What a memorable evening! Two factors had made it an extra special occasion:

1. Observing the aurora from home.

2. This was the first time Lynne and I had observed an auroral display and it turned out to be a joint experience.

The saying goes “better late than never!



Members Observations

Paul Whiting

Aurora

Image from aurora 10th October 2024 (from Felixstowe)

Nikon D3200 + Samyang wide-angle, 1s f/2.8 ISO3200 – sharpened with ME picture editor.

Comet C/2023 Tsuchinshan–ATLAS

A clear night, but I looked straight over Felixstowe Docks from the Felixstowe Ferry golf course.

Mike Whybray

it was a lovely night, chilly but low wind, sharp skies, moon near setting, and mostly very little cloud. All the above were part of long sequences of shots. I'll also post a video which includes the last two images above.

All photos as taken - no post-processing. The green colouration seemed a little more intense to the eye than in my photos. The red was very visible, though overall not quite as bright as the images suggest.

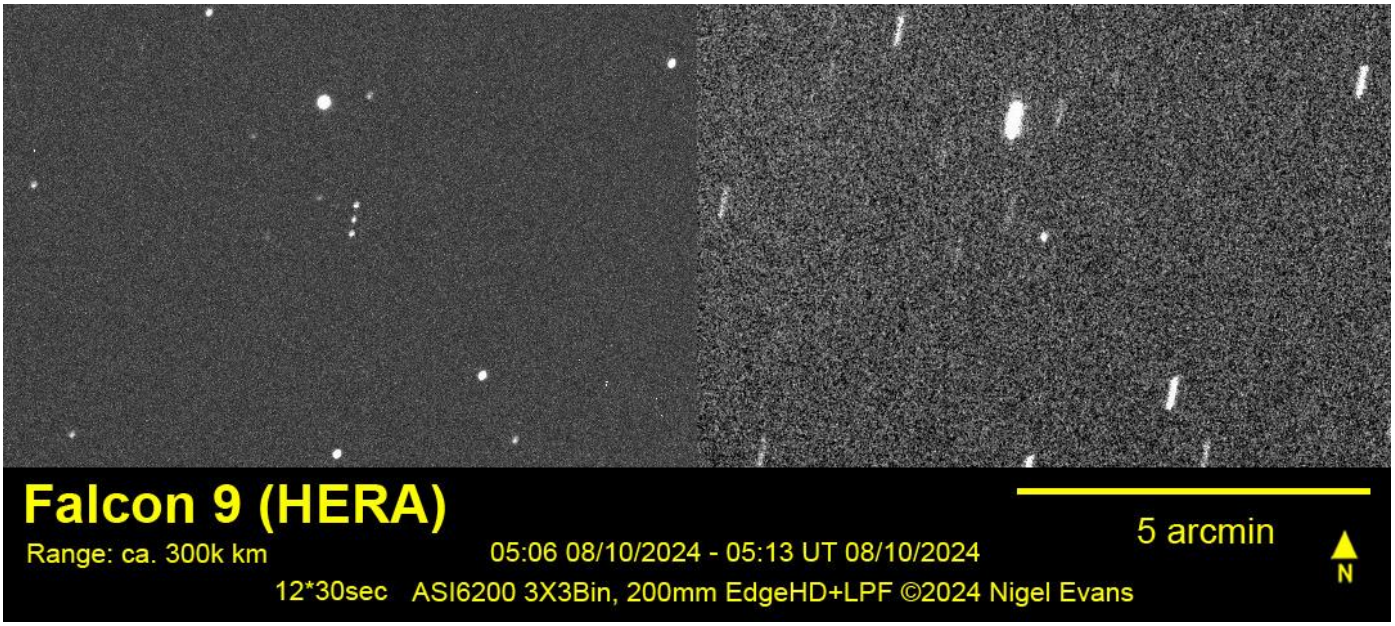
Taken with my Canon 550D (1600ASA) with Samyang 14mm lens set to F4.

Left image: Bucklesham Road at ~21:38pm 8 seconds
Right image Bucklesham Road at ~21:59pm 5 seconds


Left image: Front garden Nacton ~00:16am 4 seconds
Right image: Front garden Nacton ~00:28am 4 seconds


Nigel Evans

Falcon 9 (Hera)



On October 7 HERA was launched to investigate the asteroid Didymos, following the DART impact.

The prospects of imaging it on the first night/following morning were slim. It rained overnight, with gradual clearing towards dawn. At 4:00am I woke and was surprised to find clear skies. The air was very humid, so much so that the camera dew heater took an age to clear condensation on the window and a hairdryer was needed to shift the condensation on the inside of the telescope corrector plate. Once sorted it time to collect some images - then it clouded over! I persevered as the clouds were fast moving and eventually clear skies reappeared. More images. As I checked them, I suddenly realised another problem - the telescope was incorrectly aligned about 1 degree off target and dawn was approaching. I shifted the telescope to collect a few images before the sky brightened too much.

12 images. Only one moving object was was found - and it was flashing with a period of 2-3 minutes (241008 HERA falcon Carrier NSE v2.mp4 & 241008 HERA falcon Carrier NSE.jpg). This is almost certainly the carrier rocket, not the probe. It flashed from mag 15 to invisibility. And the probe? It was nearby but is just too faint to find.

Aurora 7/8th October

The solar storm of 7/8 October that promised to bring aurorae has been.
A bit of activity was seen in my north-facing camera on Oct 7
There was also some activity on the morning of 8 October. The activity continued through to dawn. I was up to track HERA and was aware of the activity, but yet again saw nothing. The dark shadow at the bottom right is water from the rain that fell earlier

Andy Gibbs

Before our Weekly meeting at Orwell Park, I decided to take advantage of the mainly clear skies to observe and image the Comet. I decided to walk the few yards from my home to Bourne Park, where I would get a clearer view of the South West horizon..

I managed to view the Comet with Binoculars from 19:05 BST and this image was taken at 19:11 BST. My view was that the Comet had faded slightly in brightness compared to our observation at Newbourne on Monday 14th October. However, as the sky darkened, it was just about visible to the naked eye.

I used a Canon EOS 1200D camera with a Samyang 14mm f2.8 lens. ISO 800, 4sec exposure.

I tweaked the final image in Affinity Photo 2 with the Clarity and Denoise filters.

Adam Honeybell

Comet

Comet C/2023 Tsuchinshan from my garden in Ipswich, just after sunset, 17th October 2024

Aurora

Panoramic view of Aurora looking towards the Orwell Bridge. A series of 10 second exposures on tripod, then merged in Photoshop. Using Samyang 14mm. I attempted this in May but I hadn't quite focussed correctly, so I was determined to get it right if I ever got the chance again.