oasi.org.uk

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OASI News

The newsletter of Orwell Astronomical Society (Ipswich)

Martin Cook using OASI SeeStar S50: NGC 281, the Pacman Nebula, a bright emission nebula in the constellation of Cassiopeia.

30/12/2024 19:24 - 21:30

114 minutes of stacked 20 second images. AI de-noise.

Trustees: Mr Neil Morley Mr David Payne Mr Bill Barton

Honorary President: Dr Allan Chapman D. Phil MA FRAS

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Society Notices

Dear Members,

Our Annual General Meeting takes place on Monday 26th January 2026 at Newbourne Village Hall, starting at 7.45 pm, (during our regular Newbourne Meeting). We will be reportIng on the activities of our society over the past year and electing Officers and Committee members for 2026. If you are interested in joining the Committee, please let us know. During 2025, we operated with one Committee post vacant. Moving forward, it is crucial that we have members willing to help out with the day-to-day running of our society.

I would like to wish you and your families a Happy New Year with plenty of clear skies and I hope to see you at our meetings in 2026.

Andy Gibbs,

Chairman.

Committee 2026

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
	Mike Whybray	Astronomy Workshops, Child protection officer, Orwell Park School Astronomy
	Andy Willshere	Librarian
	Adam Honeybell	Newsletter
	Paul Whiting	OASI @ Newbourne

Committee Meeting

Our Annual General Meeting takes place on Monday 26th January 2026

New Members

Julie McCracken

Robert Griggs

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
WhatsApp:	There is a WhatsApp group. Please email to be added.

We'd like to use social media a little more, since it's a more direct and immediate way to interact with members and potential members. Feel free to post pictures, comments or interesting articles. The more it's used, the more other people will be inclined to use it as well.

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 January).

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

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

Reproducing articles from OASI News

If you plan to reproduce an article exactly as per OASI News then please contact the Editor – otherwise, as a matter of courtesy, please seek permission from and credit the original source/author. You may not reproduce articles for profit or other commercial purpose.

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. See website for more events.

Date, Time & Location	Contact	Event
Weekly, every Wednesday, from 20:00, Orwell Park Observatory, Nacton	Martin Cook	Observatory open
Monday 5th January 2026 20:00 Orwell Park Observatory	Paul Whiting	Taster evening . Places must be booked in advance by email: tour@oasi.org.uk .
Monday 12th January 2026 19:30 Newbourne Village Hall	Paul Whiting	Newbourne meeting - beginners and new members welcome! 19:30 Doors open.
Monday 26th January 2026 19:30 Newbourne Village Hall AGM	Paul Whiting	Newbourne meeting - beginners and new members welcome! 19:30 Doors open. 19:45 AGM Followed by Sky Notes by Bill Barton, FRAS.
Monday 2nd February 2026 20:00 Orwell Park Observatory	Paul Whiting	Taster evening . Places must be booked in advance by email: tour@oasi.org.uk .

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.

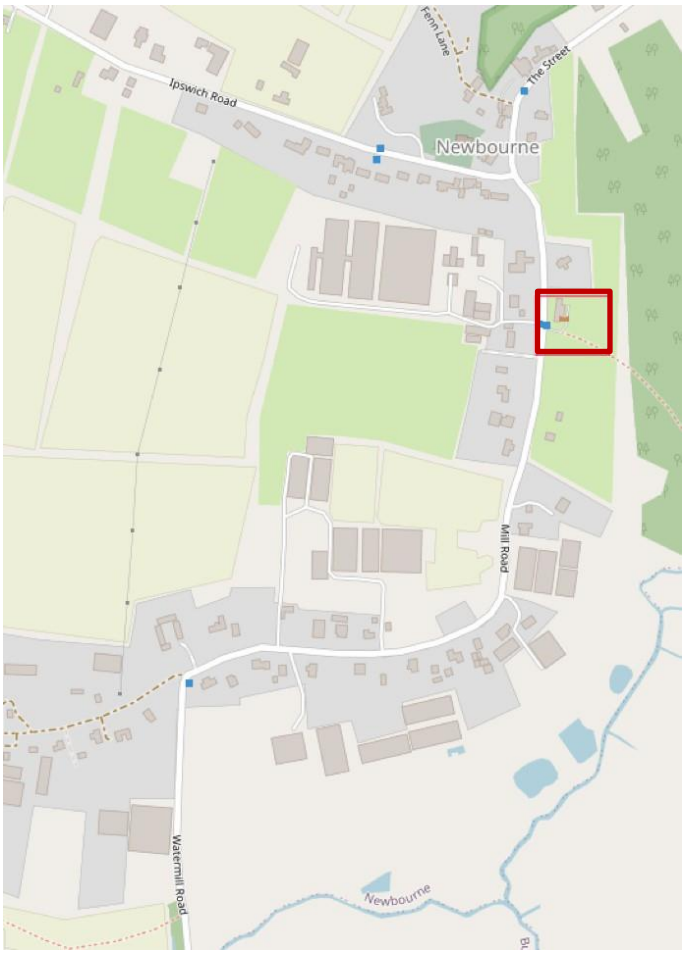
• Turn left at the end of the short corridor then immediately right.

• 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 2026		
January	12	26(S)
February	09	23(S)
March	09	23(S)
April	06#	27(S)
May	04#	25(S)
June	08	22(S)
July	13	27
August	10	24
September	14	28
October	12	26
November	09	23
December	14	

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

Astro News (A) / Sky Notes (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 2026

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 some enthusiasm! Just respond to the email call for help prior to the event.

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

Christchurch Mansion Saturday 28th February 2026 18:00 – 20:00	Roy Gooding	**Setup time: 17:00** If it is cloudy, we will set up an exhibition area in the mansion entrance hall. Details for this, still too be worked out. If you can help please contact me.

BAA news, events & webinars

BAA: https://britastro.org/events/future-events

Events correct at time of publication, please go to website for latest information.

Date	Event
Saturday 24th January	BAA Meeting
Saturday 31st January	SPA Meeting

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 January 2026

Event times are for Orwell Park Observatory at 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

Object	Date	Rise	Set	Mag.	Notes
Sun ☉	1	08:03	15:54		
	31	07:37	16:41		
Moon ☾	1	13:16	06:27		Full Moon : 03 January 10:03 Last Quarter : 10 January 15:48 Apogee : 13 January 20:48 New Moon : 18 January 19:52 First Quarter : 26 January 04:47
	31	14:35	07:13		
Mercury ☿	1	07:25	14:47	-0.5	
	31	08:11	17:05	-1.2	
Venus ♀	1	08:08	15:36	-3.8	
	31	08:05	17:01	-3.8	
Mars ♂	1	08:23	15:49	1.2	
	31	07:37	15:57	1.2	
Jupiter ♃	1	16:35	08:47	-2.5	
	31	14:17	06:36	-2.5	
Saturn ♄	1	11:18	22:38	1.2	
	31	09:23	20:54	1.1	
Uranus ♅	1	13:04	04:40	5.6	
	31	11:05	02:40	5.7	
Neptune ♆	1	11:18	23:00	7.9	
	31	09:21	21:05	7.9	

Occultations during January 2026

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 January 2026

The Quandrantids are visible in early January, however they'll have passed by the time this newsletter is published. But for posterity (and because they happen every year) I've posted them here:

Name	Date of Maximum	Dates visible	Max z	Description
Quadrantids	Early hours of 4 January	28 Dec-12 Jan	120	Bluish- or yellowish-white meteors with fine trains

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.

Comet	Brightness	Date of last reported observation	Angular separation from sun	Constellation
C/2025 A6 Lemmon	9.2	2026-Jan-17	43.0	Scorpius
C/2025 T1 ATLAS	10.8	2026-Jan-18	19.0	Aquarius
29P Schwassmann-Wachmann 1	13.0	2026-Jan-17	123.0	Leo
3I ATLAS	13.2	2026-Jan-18	173.0	Cancer
210P Christensen	13.4	2026-Jan-17	66.0	Libra
235P LINEAR	13.8	2026-Jan-17	68.0	Libra
C/2022 N2 PANSTARRS	14.1	2026-Jan-18	114.0	Aries
C/2025 R3 PANSTARRS	14.2	2026-Jan-16	50.0	Pegasus
240P NEAT	14.4	2026-Jan-18	115.0	Aries
509P Catalina	14.5	2025-Dec-28	136.0	Taurus
88P Howell	14.5	2026-Jan-14	30.0	Sagittarius
C/2025 R2 SWAN	14.7	2026-Jan-09	86.0	Pisces
C/2022 QE78 ATLAS	14.7	2026-Jan-16	161.0	Cancer
C/2014 UN271 Bernardinelli-Bernstein	15.0	2026-Jan-14	80.0	Mensa
C/2024 T5 ATLAS	15.1	2026-Jan-17	84.0	Fornax
C/2021 G2 Atlas	15.6	2026-Jan-09	49.0	Ophiuchus
C/2025 L1 ATLAS	15.8	2026-Jan-17	56.0	Lupus
C/2025 Q3 ATLAS	16.0	2026-Jan-14	86.0	Cetus

Visible ISS passes >30º max altitude for January 2025

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

Times are **GMT**.
Predictions are approximate (07/04/25) due to craft adjustments. Check the day before.
There are more passes than this, but they're below 30 degrees, so will be harder to spot unless you have good weather and can see the horizon. As with stella/planetary brightness, the more negative the magnitude, the brighter it is.

Date	Brightness	Start			Highest point			End		
	(mag)	Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.
17 Jan	-2.9	17:37:11	10°	SW	17:40:20	40°	SSE	17:42:10	20°	E
18 Jan	-3.9	18:25:41	10°	WSW	18:29:02	76°	S	18:29:09	74°	SE
19 Jan	-3.6	17:37:47	10°	WSW	17:41:06	65°	SSE	17:43:10	21°	E
20 Jan	-3.9	18:26:30	10°	W	18:29:52	86°	S	18:30:05	77°	ESE
21 Jan	-3.8	17:38:30	10°	W	17:41:51	83°	S	17:44:03	20°	E
22 Jan	-3.8	18:27:14	10°	W	18:30:35	77°	S	18:30:57	66°	SE
23 Jan	-3.8	17:39:10	10°	W	17:42:31	84°	S	17:44:56	18°	E
24 Jan	-3.2	18:27:51	10°	W	18:31:07	54°	SSW	18:31:53	42°	SSE
25 Jan	-3.5	17:39:42	10°	W	17:43:03	67°	SSW	17:45:58	13°	ESE
26 Jan	-2.2	18:28:25	10°	W	18:31:27	31°	SSW	18:33:05	20°	SSE
27 Jan	-2.6	17:40:11	10°	W	17:43:22	42°	SSW	17:46:34	10°	SE

PLATO (Planetary Transits and Oscillations of stars.)

Short article from the Library.

Andy Willshere

PLATO is designated to be launched late in 2026 using an Ariane 6 rocket, from the spaceport in the town of Kourou situated in French Guiana. This spaceport is approximately 5° north of the equator which allows flights to the east to obtain some speed assistance from the earth's rotation. The Ariane 6 is available in two versions, one with two boosters (Ariane 62) and one with four (Ariane 64). The former can launch loads up-to 4.5 tonnes into geostationary orbit, the latter 11.5 tonnes. This craft is adaptable for both large and small payloads, weight dependant. With a full payload they weigh about 900 tonnes, and can be used for many applications. With the main stage and solid rocket boosters, Ariane is thrust into the first flight phase. This core stage is energised by the liquid fuelled Vulcain 2 engine, with P120C boosters adding propulsion for liftoff. The re - ignitable Vinci engine powers the upper stage and is powered by a mixture of liquid oxygen and hydrogen. At the top of the rocket is a carbon - fibre nose-cone that is capable of dividing vertically into two, one 20m in size and one a 14m variant.

PLATO Mission Consortium sticker. Picture credit ESA.

This quest will take four years as a principal mission but if found necessary could be extended. The main goal will be to observe and identify planets similar to Earth rotating around Sun – like stars.(> 200,000). In order for this to happen the upper stage of the rocket will convey PLATO to the Sun – Earth L.2 Lagrange point. This is a point in space where the gravitational forces from the Earth and Sun balance each other in order that PLATO is able to remain in a stable position without a large energy expenditure. It is also an area that has little interference from Earth's radiation, but allows a clear view to Earth for communications.

It is from here that PLATO will carry out its primary scientific objectives. These are:

- Designate terrestrial exoplanets, and to identify its properties.
- Identify planetary systems and establish accurate stellar masses, radii and ages.
  - Perform asteroseismology. (how stars form and what they are made from). This will identify stellar parameters and age of subject.
  - Seek out very bright targets for atmospheric spectroscopy. Data results will produce light curves to be used to discover planetary transits, from which radii will be calculated.

This data obtained will form the building blocks of a comprehensive catalogue.

PLUTO has 26 cameras that all work together to provide the telescope's eyes. The engineers designed them to operate similarly as insects compound eyes. So they are placed at different angles to increase the field of view. Of

the 26 cameras, 24 are classed as normal and 2 classed as fast for photographing bright stars. Each normal camera has a 120 mm lens fitted. There are four CCD detectors in every camera and each one gives an image of 20 megapixels. They operate at a temperature of < - 65°C for the most favourable sensitivity. When a planet transits a star there is a dimming/brightening of the observable light. These detectors will respond to these changes. Images are acquired every 25 seconds by the normal cameras, which are grouped into four sets, with each set pointing outward at a 9.2° angle, which will give a total field view of 2232 square degrees. PLATO therefore is able to view concurrently about 5% of the whole sky. The two fast cameras capture an image every 2.5 seconds and can only be used to capture bright stars.

It is hoped that PLATO will expand upon the achievements of The COROT, KEPLER K2 and TESS missions. It will also increase the data already provided by CHEOPS. (Planet watcher).

- CHEOPS (***CH***aracterising ***E***x***OP***lanet ***S***atelite). This mission was launched in 2019 from French Guiana. It studies bright stars of known exoplanets, in order to make precise observations.
- COROT (***CO***nvection, ***RO***tation and ***T***ransists planetaires). This was a space telescope mission from 2006 to 2013. Its objectives were to look for extrasolar planets and conduct asteroseismology.
- TESS (***T***ransiting ***E***xoplanet ***S***urvey ***S***atellite).
- KEPLER K2. This was NASA's first assignment to look for earth – sized planets orbiting stars, near habitable sectors and outside our solar system. It also estimated the quantity of stars that could possibly have such planets. Launched 2009, retired 2018.

PLATO will pinpoint fascinating targets that will be passed on to the James Webb Space Telescope and also some ground based observatories. Both PLATO's discoveries and data from Gaia's mission will be concatenated to provide a comprehensive study. In the future, ESA'a Ariel mission will take PLATO's place, with a launch date of 2029.

References:

ESA - Plato

PLATO (spacecraft) - Wikipedia

| Planetary Transits and Oscillations of Stars: the ESA M3 mission in the Cosmic Vision 2015-2025

PLATO (PLAnetary Transits and Oscillation of Stars) - eoPortal

Aurora from Norway - Mike Whybray

On 14th November about 9pm we were coming in to land at Tromso airport in the wind and snow. Seconds later the pilot had put on full thrust and we were clawing our way back into the air again! Slightly nerve-wracking as we then spent half an hour circling, waiting for visibility to improve so the pilot could see the runway – but finally we did touch down, to a heartfelt round of applause. Thus began 6 days in Norway in hopes of seeing the Northern Lights.

I'd timed our visit to coincide with the moon being below the horizon during the evening and night, and some reasonable prospect of good solar activity, but unless you fly out at a few days notice there is not much you can do to ensure clear skies. So on only one night did we get to see the aurora, and that through drifting cloud.

We stayed in one floor of a house on the edge of a housing area on Kvaløya, which is the larger island to the West of Tromsøya. From there, driving 5km North got us to a parking area with fairly dark skies, very little traffic, and facing North. Although there was no moon, reflections of the city glow from Tromsø did under-light clouds a bit - as well as the clouds getting in the way of the sky! Even so, from 1:10 am on 18th November I was able to capture about 40 minutes worth of a photos of the aurora. I began with 10 second exposures, but quickly changed to 5 second ones to be able to make better moving sequences. Equipment: Canon 550D camera set to ISO 1600, Samyang 14mm F2.8 lens, stopped down a half stop to F3.3. Images below were all 5 seconds, processed with RawTherapee to subtract Dark Frames, and to apply a Haze Reduction tool which reduced the impact of the clouds.

An advantage of the Tromsø location is that you can fly direct from Luton (by Wizzair) rather than having to make a connection (we missed our connection in Oslo 10 years ago!). Also it has enough interesting sights to entertain you during the day and make the visit worthwhile even if you never see the aurora, including: Arctic Cathedral, Planetarium/Science Centre, Art Gallery, University Museum, Arctic Museum, Polaria Aquarium, Snow, and Fjords with lovely crinkly edges.

Member observations

Martin Cook

NGC 89, edge on spiral galaxy in the constellation of Andromeda.

OASI Seestar S50:

30/12/2024 17:50 – 19:21.

69 minutes of stacked 20 second images. AI de-noise.

Paul Whiting

Just an old favourite with the Seestar, but using the panoramic function to see the whole area of M42 and M43.

20 minutes of 10s frames taken on 19th December.