



OASI News

The newsletter of Orwell Astronomical Society (Ipswich)



Paul Whiting using SeeStar
3 Galaxies
M85
M98
M99

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,

The nights are getting shorter, but there is still a chance to observe the galaxies in Leo and Virgo, when it eventually gets dark. It would be great to hear about your observations or see your images.

As usual, during the Summer months, we will be providing Solar observing at a number of outreach events. We always need members to help out at these events, to ensure things run safely and successfully. The dates of these events, when they are confirmed, will be published on the website and in the Newsletter, plus our Social Media. If you can spare the time to help out, please let myself or any Committee member know.

I look forward to seeing you at our upcoming meetings during the next month.

Thank you,

Andy Gibbs, Chairman.

Chairman.

Committee 2025

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 Club
	Andy Willshire	Librarian
	Adam Honeybell	Newsletter
	Paul Whiting	OASI @ Newbourne

Committee Meeting

The next Committee Meeting will be the Friday 30th May 2025 on Zoom. All members welcome.

New members

Jenifer Hammond
Welcome!

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 May).

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 May 19:30 Newbourne Village Hall	Paul Whiting,	Newbourne meeting - beginners and new members welcome! Observing target for the month: the Moon.
Monday 19th May 20:00 Zoom	Paul Whiting,	Pre-recorded talk: What Gravitational Waves can tell us About the Universe by John Veitch. (Zoom login details are provided in an email to members.)
Friday 23rd May 19:45 St Augustine's Church, The Lantern Room (church annex)	Pete Richards	Lecture Meeting. Paul Fellows, Chairman of Cambridge Astronomical Association , Where are the Sun's Sisters? Our 2025 lecture series .
Monday 26th May 19:30 Newbourne Village Hall	Paul Whiting,	Newbourne meeting - beginners and new members welcome! Observing target for the month: the Moon. 19:30: doors open. 19:45: Sky Notes by Bill Barton, FRAS.
Friday 30th May 20:00 Zoom	Roy Gooding	Committee meeting via Zoom. All members are invited to attend.

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](https://www.what3words.com/?w3w=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

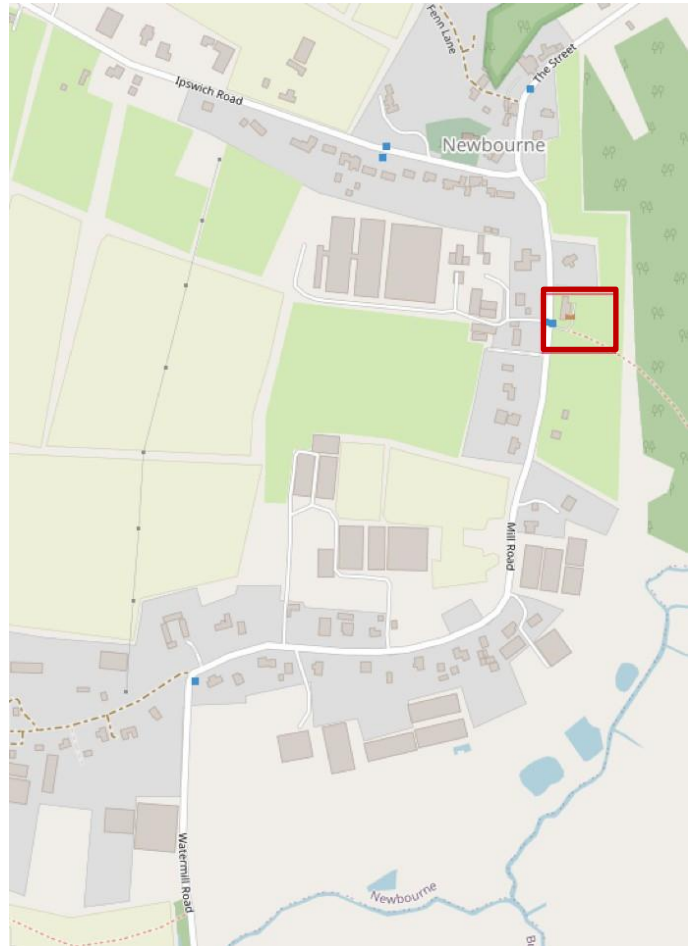
We meet at Newbourne Village Hall, Mill Lane, IP12 4NP on the 2nd and 4th Mondays from 19:30.

What3Words [scars.atlas.printing](https://www.what3words.com/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 2025		
May	05#	26(S)
June	09	23(S)
July	14	28
August	11	25
September	08	22
October	13	27
November	10	24
December	08	22



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 2025

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.

Sunday 15th June 09:30-16:00 East Suffolk Wireless Revival	Public access event. Solar observing. Booking not necessary.

BAA news, events & webinars

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

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

31 st May 2025	Historical Section Meeting	The Historical Section's annual meeting for 2025 will take place at the Devon and Exeter Institution, Exeter, Devon.

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>.

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The Night Sky in May 2025

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	04:25	19:20		
	31	03:42	20:05		
Moon ☾	1	06:19	-		First Quarter : 04 May 13:52 Apogee : 11 May 00:48 Full Moon : 12 May 16:56
	31	07:53	-		Last Quarter : 20 May 11:59 Perigee : 26 May 01:34
Mercury ☿	1	04:01	16:38	0.1	
	31	03:46	20:12	-2.2	
Venus ♀	1	03:11	15:20	-4.4	
	31	02:13	15:29	-4.2	
Mars ♂	1	09:53	01:48	0.9	
	31	09:25	00:19	1.3	
Jupiter ♃	1	06:28	22:47	-1.8	
	31	04:55	21:20	-1.8	
Saturn ♄	1	03:26	14:56	1.2	
	31	01:33	13:12	1.1	
Uranus ♅	1	05:08	20:35	5.8	
	31	03:14	18:47	5.8	
Neptune ♆	1	03:27	15:16	7.9	
	31	01:30	13:22	7.9	

Occultations during May 2025

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 May 2025

Name	Date of Maximum	Normal Limits	Possible hourly rate	Description
Eta Aquariids	5 th May	19 th April-28 th May	40	Low in the sky, associated with Halley's comet

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 F2 SWAN	8.6	2025-May-02	21°	Taurus
C/2023 A3 Tsuchinshan-ATLAS	11.8	2025-May-02	92°	Vulpecula
29P Schwassmann-Wachmann 1	13	2025-May-03	98°	Leo
C/2021 G2 Atlas	14	2025-May-03	168°	Libra
C/2014 UN271 Bernardinelli-Bernstein	14.5	2025-Apr-30	83°	Reticulum
C/2021 G1 Leonard	15.1	2025-Apr-28	30°	Eridanus
49P Arend-Rigaux	15.2	2025-Apr-29	39°	Taurus
C/2022 E2 ATLAS	15.2	2025-Apr-27	35°	Andromeda
C/2023 T3 Fuls	15.3	2025-Apr-25	152°	Centaurus
C/2023 C2 ATLAS	15.7	2025-Apr-30	53°	Pegasus
P/2010 H2 Vales	16	2025-Apr-30	147°	Virgo

Visible ISS passes >30° max altitude for May 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	Brightne ss (mag)	Start			Highest point			End			Pass type
		Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.	
06-May	-3.6	19:10:57	10°	SW	19:14:18	72°	NW	19:16:25	21°	NNE	visible
07-May	-3.4	18:23:20	10°	SSW	18:26:33	42°	SE	18:29:44	10°	NE	visible
09-May	-1.5	18:24:32	10°	WSW	18:27:31	29°	NW	18:30:29	10°	N	visible
11-May	-3.3	05:12:25	10°	NNW	05:15:43	66°	NE	05:19:02	10°	SE	visible
12-May	-1.5	04:25:01	10°	N	04:27:52	26°	NE	04:30:44	10°	ESE	visible

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>

May 2025 science question

Andy Wilshere

If,

S.P.I.N. = 8281

S.H.I.P. = 7225

B.I.N.S. = 6561

What does P.H.O.N. equal.

Clue: All are similar elementarily.

The Hubble Tension

Short article from the Library

Andy Willshere

When calculating the Hubble constant H_0 using two procedures, a discrepancy between the two results occurred. This is described as the 'Hubble Tension'. The calculation results produce a differing rate at which the universe is expanding, which is giving scientists a severe headache.

Hubble's Law was published in 1929, but the rate of universe expansion was first derived from the equations of General Relativity by Alexander Friedmann in 1922, suggesting that expansion may be occurring and presenting a method of calculating an expansion speed. It later became known as the Friedmann:Lemaitre:Robertson:Walker metric. His equation for negative spatial curvature was given in 1924.

Hubble began to notice by observing distant galaxies that they appeared to be moving away, demonstrating that the universe was expanding. From his observations he derived his calculation that stated the receding velocity of the galaxy from Earth is directly proportional to its distance. ($v = H_0 * d$). [V = galaxy recessional velocity and d = distance to the galaxy]. H_0 therefore becomes the rate of expansion of the universe. Over decades astrometric scientists of various flavours have been attempting to obtain an exact value of H_0 . Two main methods have been employed to attain this 'golden fleece'. Firstly, by using multiple measures of local distance and redshift. This process is also known as the 'Cosmic Distance Ladder' method, and relies on a series of interdependent measurements to calculate cosmic distances. Initially Cepheid variables are used to measure shorter distances. These are stars that pulse at anticipated rates from which their intrinsic brightness can be quantified. Recently the Hubble Space telescope was used to observe a number of these Cepheid variables to obtain as precise distance as possible. To gain further distance measurements, astronomers use type 1a supernovas, which are much brighter than Cepheids, and are used as measuring posts. Each sector is a rung on the ladder obtained by reliable markers, eventually allowing astronomers to reach much longer distances in the universe. Initially parallax was used to calculate precise distances to celestial objects. A scientific team using DESI (Dark Energy Spectroscopic Instrument) as well as the Fundamental Plane¹ and Tully-Fisher relations were able to establish distances to early-type galaxies. A second team using the DESI data began to create a more specific first rung on the ladder. They used the Coma cluster, which is fairly close to Earth, and in particular twelve SNe 1a. This allowed them to obtain reliable distances to the cluster. Having obtained this first ladder rung measurement, it was easier for them to calibrate the remainder. This paper was titled 'The Hubble Tension in Our Own backyard: DESI and the Nearness of the Coma Cluster' (Daniel Scolnic et al.). They calculated that H_0 was $76.5 \text{ km s}^{-1} \text{ Mpc}^{-1}$.

The second method was by using an implied value based on the cosmic microwave background (CMB), and the standard model of cosmology, which presupposes conventional physics. The 'Cosmic Microwave Background' is the cooled remainder of microwave radiation that occupies all space in the observable universe. It is 'relic' radiation. Temperature fluctuations within the CMB allow cosmologists to deduce the universe's composition, expansion rate and shape. Exact CMB measurements have been provided by the European Space Agency and its Planck satellite. The spacecraft was thrust into space along with Herschel's space telescope on board an Ariane 5 EC launcher on 14th May 2009. It was switched off 23 October 2013.

The differences between the two figures can be seen as follows. Distance ladder, $H_0 \sim 73 - 76.5 \text{ km s}^{-1} \text{ Mpc}^{-1}$, whilst with the CMB, $H_0 \sim 67.5 \text{ km s}^{-1} \text{ Mpc}^{-1}$. This means that the cosmos today is galloping away faster than we would expect based on the results from the CMB in our early universe.

Why this has occurred has caused some consternation within the scientific fraternity, leading to a re-evaluation of

its possible causes. Initially systematic errors were considered. The distances that astronomical observations require make it very difficult to minimize errors, so this factor must always be examined. There is a possibility that distance quantification of Cepheid variables become less accurate due to star congestion making them difficult to precisely visualise, and the further away, the more overlapped they appear. Will scientists have to entertain a version of 'New Physics' with the inclusion of dark energy into the present format, causing the 'standard model of cosmology' to be modified?

There has been over the last ten years, research into measuring extragalactic distances, but instead of using the standard candle of type Ia supernova, type II supernova have been used. These measurements are unrelated. (Perlmutter and Schmidt 2003). Using the expanding photosphere method (EPM), developed by Kirshner and Kwan, with further research by Schmidt, type II comprehension improved. EPM surmises that SNIa radiate as a dilute black body. (Astrophysical concept where some celestial objects emit radiation differently to that of a perfect black body, due to atmospheric scattering for example). Schmidt et al. utilising this method obtained an $H_0 = 73 \pm 6$. (statistically). Increasing the number of supernovae spotted provides for less statistical error and allows for a more precise Hubble constant.

Today, we have the 'James Webb Space Telescope' and the Vera C. Rubin Observatory in Chile, formerly known as the 'Large Synoptic Survey Telescope' (LSST) enabling scientists to acquire greater precision towards cosmic distances. This will make the estimate of H_0 more accurate. Work is increasing to design new inventive methods to ascertain universal expansion, which includes studies with gravitational waves provided by merging neutron stars. Theoretic models will also have to be refined, especially investigating the properties of dark matter, which may lead to some tweaking of general relativity, or perhaps uncover some exotic particles.

However, close the two figures get, it shows that nothing in science can be set in stone. Established ideas of cosmology can and should be challenged by new concepts. This is the only way to unlock the paradigm of the Hubble Tension.

References:

Relationship between 'effective radius, surface brightness and velocity dispersion' of standard elliptical galaxies.

[Fundamental plane \(elliptical galaxies\) - Wikipedia](#)

[\[2409.14546\] The Hubble Tension in our own Backyard: DESI and the Nearness of the Coma Cluster](#) .[Daniel Scolnic](#), [Adam G. Riess](#), [Yukei S. Murakami](#), [Erik R. Peterson](#), [Dillon Brout](#), [Maria Acevedo](#), [Bastien Carreres](#), [David O. Jones](#), [Khaled Said](#), [Cullan Howlett](#), [Gagandeep S. Anand](#)

[Hubble tension and Hubble constant explained | BBC Sky at Night Magazine](#)

<https://science.nasa.gov/mission/webb/latestnews/>

[Three Steps to the Hubble Constant - NASA Science](#)

[\[astro-ph/0303428\] Measuring Cosmology with Supernovae](#)

. R.P. Kirshner, J. Kwan: *Astrophys. J.* 193, 27 (1974)

B.P. Schmidt, R.P. Kirshner, R.G. Eastman, M.M. Phillips, N.B. Suntzeff, N.B. Hamuy, J. Maza, R. Aviles: *Astrophys. J.* 432, 42 (1994)

Members Observations

Paul Whiting

Using SeeStar



Clockwise from top left:

M3 globular cluster CVn 3:30 mins
equivalent stacked time 19/4/25

M13 globular cluster Her 2:50 mins 19/4/25

NGC 2403 spiral galaxy Cam 60:00
mins 11/4/25



NGC 4631 / 4656 (Whale Galaxy) edge-on spiral galaxy CVn 33:10 mins 17/4/25

NGC 4173 / 4174 / 4175 / 4169 galaxy quartet Com 33:10 mins 19/4/25