



OASI News

The newsletter of the Orwell Astronomical Society



Solar observing outside UCS on International Sun Day

Photo: David Murton

Trustees: Mr Roy Adams Mr David Brown Mr David Payne
Honorary President: Dr Allan Chapman D.Phil MA FRAS

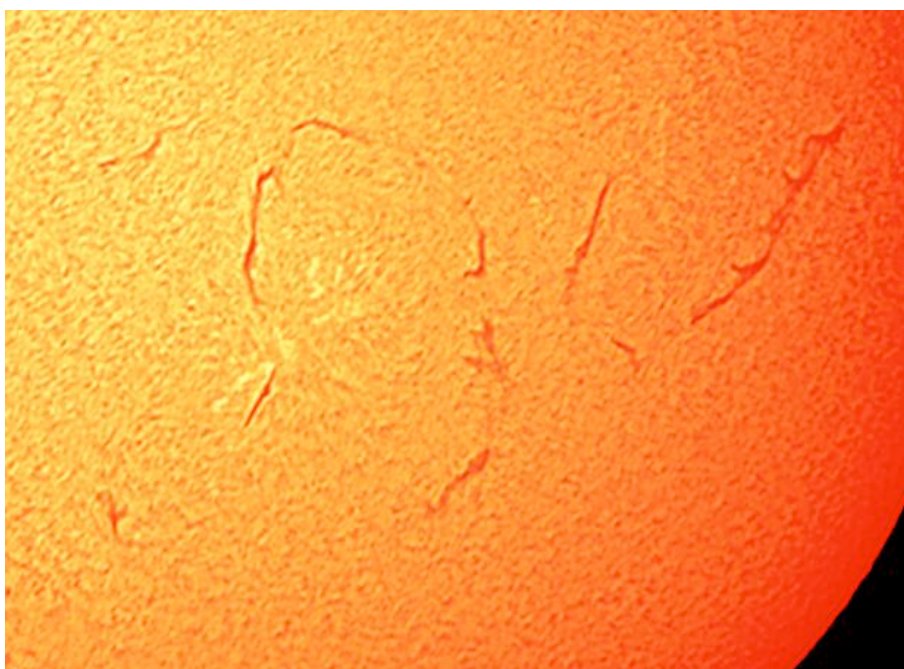
Solar pictures in H-alpha

David Murton



2nd July from Westleton Common. No spots or prominences but lots of filaments.

Altair GPCAMV2 IMX224 camera on Coronado PST.



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Society Contact details

Observatory (meeting nights only)
07967 519249

contributors.

Email queries: info@oasi.org.uk

Facebook: <https://www.facebook.com/groups/445056098989371/>

Twitter: @OASlpswich

The OASI Facebook pages are now proving very popular. Several non-members are active

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

news@oasi.org.uk

Other contact details will be issued to members on a separate printed list or emailed directly to those who only receive the e-version of the News.

Access into the School Grounds and Observatory Tower

Please use the third gate into the school grounds by the gym.

Areas out of Bounds

Access to the Observatory is **only via the black door** at the foot of the Observatory tower, which leads to the staircase and thence to the spiral staircase up to the Observatory. If the black door is locked, please phone the observatory mobile, 07967 519249 during meeting hours.

Please do NOT explore other routes. When in doubt, ask or call the Observatory mobile.

Remember this is a school and straying into the main part of the school where the pupils reside would cause the society big problems and could see us losing the use of the observatory. Any member found to be anywhere other than the approved access route or the observatory area will face serious sanctions up to and including expulsion from OASI.

Please note that access time for all observatory member nights is after 20:15

The key to the toilets in the school gym is located in the seating area in the Belvedere room.

Articles for OASI News

News, pictures and articles for this newsletter are always welcome. Please send them to

news@oasi.org.uk

The CLOSING date is the 15th day of the month

Please submit your articles in any of the following formats:-

Text: txt, rtf, rtf, doc, docx, odt, Pages, pdf

Spreadsheets: xls, xlsx, OpenOffice/LibreOffice, Numbers

Images: tiff, png, jpg

Please send tables as separate files in one of the above formats.

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."*?

Articles win points! See page 13.

The full colour version is available from the OASI web site.

[Newsletter archive www.oasi.org.uk/NL/NL_form.shtml](http://www.oasi.org.uk/NL/NL_form.shtml)

Authors, please note that your articles will now 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.

Committee 2016

Chairman	David Murton	Set overall agenda for OASI, Chair committee meetings, Press and publicity, Public appreciation of astronomy, Outreach activities.
Secretary	Roy Gooding	Outreach meetings (jointly with Chairman), observatory decoration.
Treasurer	Paul Whiting FRAS	Finance, Supervision of applications for grants, Visits by outside groups, Observatory tours, Public appreciation of astronomy (jointly with Chairman).
Committee	James Appleton	Committee meeting minutes, Web site
	Martin Cook	Membership, Tomline refractor maintenance & user testing
	Peter Richards	Lecture meetings, Email distribution lists
	Martin Richmond-Hardy	Newsletter
	John Wainwright	Equipment curator
	Mike Whybray	Astronomy Workshops, Child protection officer, Orwell Park School Astronomy Club.
	Avtar Nagra	Newbourne Observing Group
	Matt Leeks	Safety & security
Co-opted	Andy Wilshire	Librarian

Society Notices

Contacts

A printed list of Committee and other activity contacts is available from the Secretary or the Observatory. Email links are available in the A4 pdf version of this newsletter.

For general enquiries please email info@oasi.org.uk and your enquiry will be forwarded for action.

Next Committee Meeting

Tuesday 6 September 2016, Douglas Bader, Martlesham Heath, starting 8.00pm.

Signing in and out

Please ensure you sign in and out when visiting the Observatory and/or Newbourne.

This is for fire safety precautions and also provides an historic record.

Welcome New Members

Michelle Childs

Adrian Barker

Simon Meadowcroft

OASI and BAA Events

For the latest event details, please see www.oasi.org.uk/Events/Events.php

There's a Google Calendar on the OASI web site with the latest dates (and corrections!). If you want to easily add OASI Events to your own computer/phone/tablet calendar application click this button on the website Events page



Download the OASI 2016 year planner from the web site. An A3 printer is advised.

For other astronomy news and astro pictures try our

Twitter feed <https://twitter.com/OASIpSwich>

Facebook page <https://www.facebook.com/pages/Orwell-Astronomical/158256464287623>

Subscribe to the OASI Yahoo group by emailing oasi-subscribe@yahoogroups.com

Date and Time	Location	Contact	Event
Weekly, every Wednesday, 20:15	Orwell Park Observatory	Martin Cook, Roy Gooding	General observation (weather permitting) using a variety of telescopes. Entry via the third gate left. NOT the main gate
Monday 08 August From 19:00	Newbourne Village Hall	Avtar Nagra nog@oasi.org.uk	Newbourne Observing Group Sky Notes: Bill Barton Workshop: Update on the Rosetta Mission
Thursday 11 Aug			Perseids peak
Monday 22 August From 19:00	Newbourne Village Hall	Avtar Nagra nog@oasi.org.uk	Newbourne Observing Group
Sunday 29 August	Alnesbourne Priory	Mike Norris	Solar observing (members only)
Sunday 4 September	Bentley Playing Field	Roy Gooding secretary@oasi.org.uk	Bentley Family Day
Monday 5 Sept from 19:00	Newbourne Village Hall	Avtar Nagra nog@oasi.org.uk	Newbourne Observing Group
Tuesday 6 Sept	Douglas Bader, Martlesham Heath	Roy Gooding	Committee meeting
Friday–Sunday 9 –11 September	Dundee	https://britastro.org	BAA Autumn Weekend Meeting <i>Stars: Theory, Physics and Effects.</i>
Friday – Sunday 9 –11 September	Horncastle, Lincolnshire	https://britastro.org	Horncastle Astronomy Weekend
Saturday 10 Sept	Capel Library	David Murton chairman@oasi.org.uk	Public Star observing
Saturday 17 Sept 10:30–16:30	Burlington House, LONDON W1J 0DU	https://britastro.org	All of the learned societies based at Burlington House are participating in <i>Open House London 2016</i> . See page 15

Date and Time	Location	Contact	Event
Monday 19 Sept, 23:30	TBA	James Appleton info@oasi.org.uk	Field trip to observe graze of 87 Cet. More info.
Monday 19 Sept, from 19:00	Newbourne Village Hall	Avtar Nagra nog@oasi.org.uk	Newbourne Observing Group
Friday 21 Sept 13:00	John Innes Centre Norwich		Dr. Matt Taylor of the European Space Agency Rosetta Mission
Saturday 24 Sept, 10:00 – 17:30	Burlington House, LONDON W1J 0DU	https:// britastro.org	BAA Observers' Workshop <i>Asteroids & Remote Planets</i>
Friday 30 Sept – Sunday 2 Oct	Kelling Heath, Norfolk		Kelling Star Party
Monday 03 October From 19:00	Newbourne Village Hall	Avtar Nagra nog@oasi.org.uk	Newbourne Observing Group
Tuesday 4 October	Orwell Park Observatory	Paul Whiting treasurer@oasi.org.uk	Observatory visit. Booking essential.
Saturday 08 October	Nowton Park, Bury St Edmunds	David Murton chairman@oasi.org.uk	Public access event. Star party to mark International Observe The Moon Night . Book a place via the West Suffolk website .
Friday 14 October 20:00	Methodist Church Hall Black Horse Lane, Ipswich	Pete Richards lectures@oasi.org.uk	Lecture Meeting. Roger Pickard (Director of Variable Star Section of the BAA), <i>Why Observe Variable Stars?</i>
Saturday 15 October	Chichester	https:// britastro.org	BAA Back to Basics Workshop
Monday 17 October From 19:00	Newbourne Village Hall	Avtar Nagra nog@oasi.org.uk	Newbourne Observing Group
Friday 21 October 23:30	TBA	James Appleton info@oasi.org.uk	Field trip to observe graze of 20 Gem or 21 Gem. More info.
Wednesday 26 October, 17:30 – 20:00	Burlington House, LONDON W1J 0DU	https:// britastro.org	BAA Annual General Meeting
Friday 28 Oct – Sunday 30 Oct	Haw Wood Farm Caravan Park, Hinton, Saxmundham. IP17 3QT	www.hawwoodfarm.co.uk	Haw Wood Star Party www.brecklandastro.org.uk/ bas-star-parties/
Monday 31 October From 19:00	Newbourne Village Hall	Avtar Nagra nog@oasi.org.uk	Newbourne Observing Group
Friday 4 November	Felixstowe Golf Club	David Murton chairman@oasi.org.uk	Meal + observing
Tuesday 8 November	Orwell Park Observatory	Paul Whiting treasurer@oasi.org.uk	Observatory visit. Booking essential.

Date and Time	Location	Contact	Event
Friday 11 November	Methodist Church Hall Black Horse Lane, Ipswich	Pete Richards lectures@oasi.org.uk	Lecture Meting: Steve Hubbard & Malcolm Brown <i>"Aliens – Are they out there?"</i>
Monday 14 November From 19:00	Newbourne Village Hall	Avtar Nagra nog@oasi.org.uk	Newbourne Observing Group
Saturday 19 Nov	Cedarwood School, Kesgrave	David Murton chairman@oasi.org.uk	Public Observing
Monday 28 November From 19:00	Newbourne Village Hall	Avtar Nagra nog@oasi.org.uk	Newbourne Observing Group
Tuesday 13 December 20:00	Orwell Park Observatory	Paul Whiting treasurer@oasi.org.uk	Observatory visit. Booking essential.
Monday 12 December From 19:00	Newbourne Village Hall	Avtar Nagra nog@oasi.org.uk	Newbourne Observing Group
Wednesday 14 Dec	TBD but probably The Newbourne Fox.	Roy Gooding secretary@oasi.org.uk	Christmas Meal.
Monday 19 December From 19:00	Newbourne Village Hall	Avtar Nagra nog@oasi.org.uk	Newbourne Observing Group Christmas event?
Monday 22 December 06:36	TBA	James Appleton info@oasi.org.uk	Field trip to observe graze of Hipparcos 63099. More info.
2017			
Tuesday 10 January 20:00	Orwell Park Observatory	Paul Whiting treasurer@oasi.org.uk	Observatory visit. Booking essential.
Tuesday 7 February 20:00	Orwell Park Observatory	Paul Whiting treasurer@oasi.org.uk	Observatory visit. Booking essential.
Tuesday 14 March 20:00	Orwell Park Observatory	Paul Whiting treasurer@oasi.org.uk	Observatory visit. Booking essential.
Tuesday 11 April 20:00	Orwell Park Observatory	Paul Whiting treasurer@oasi.org.uk	Observatory visit. Booking essential.
Saturday 29 July	UCS, Ipswich	David Murton chairman@oasi.org.uk	OASI 50th Anniversary
21 August	USA	www.greatamericaneclipse.com	Total solar eclipse

Public Solar & Star Parties organised by OASI in 2016

Alnesbourne Priory Solar Event on Bank Holiday Monday 29th August.

Set up about 10am . Please note this is a **members-only** event for Priory Park residents.

Bentley Family Day – Sunday 4th September.

Nowton Park Star Party – Saturday 8 October

<https://www.whatsonwestsuffolk.co.uk/whats-on/event/2794/the-nowton-park-star-party>

International Observe the Moon night (InOMN) is an annual worldwide public event that encourages observation, appreciation, and understanding of our Moon and its connection to NASA planetary science and exploration.

The moon will be waxing gibbous on the night and become a Supermoon on 16 October.

Other Star Parties that OASI members may be attending

Kelling Heath Star Party – 30 Sept – 2 Oct

See <http://starparty.las-astro.org.uk/index.php> for the Autumn Equinox Sky Camp.

Haw Wood Star Party Friday – 28–31 October

Haw Wood is a [Dark Sky Discovery](#) site. Naked eye visibility is magnitude 5.73; with averted vision, 5.99; best SQM reading 21.75.

[Haw Wood Farm](#) Caravans and Camping Hinton
Saxmundham IP17 3QT

David Murton plans to take the Millennium Telescope.

Newbourne Observing Group

Avtar Nagra nog@oasi.org.uk

We normally meet at Newbourne Village Hall, Mill Lane, IP12 4NP

The Newbourne Observing Group (The NOGs) is a good place to start for beginners. If you are thinking of buying a scope or binoculars, come and try before you buy and talk to owners about the strengths and weaknesses of particular models. If you've already splashed the cash, bring your new scope along to use or for advice on setting-up and adjustment. All welcome, with or without telescopes.

Newbourne Observation Group Stargazer's guide

On the first meeting each month Bill Barton will give a short presentation of what can be viewed in the following 4 weeks. For armchair stargazers (on those cloudy nights) there is a small branch of the OASI Library held at Newbourne and a copy of the full catalogue.

NOG Meetings in 2016

11(S) & 25 July	8(S,W) & 22 August	5(S) & 19 Sept
3(S), 17 & 31(W) Oct	14(S) & 28 Nov	12(S) & 19 Dec

We open up for all meetings at 7pm. Star Guide (S) and Workshops (W) start at 8pm.

Please check the web site diary for any changes during the year.

Astronomy Workshops

Contact Mike Whybray

Location: Newbourne Village Hall IP12 4NP

Doors open at 7:00pm.

Workshops start at 8:00pm

If you are a new OASI member, or haven't been to one of these informal workshops before, they are a mixture of events of different characters including beginners talks, interactive workshops, films, etc., suitable for all. They are also a chance to chat with other members over a cup of tea and a biscuit, in a venue rather warmer than the observatory dome on a winter's night!

Given a clear night, we can make use of the field for a workshop or continue afterwards with some observing – something not possible at the previous venue, Nacton village hall.

8 August: Paul Whiting will run a workshop at Newbourne providing an update on the Rosetta Mission. The talk will start at 8.00pm, following Bill Barton's brief talk on the night sky.

31 Oct: Mike Whybray will organise a workshop at Newbourne on assembly and use of the Millennium Telescope.

Do you have a subject you could workshop? You could do a short one, or share the effort with a partner. Drop Mike Whybray a line! workshops@oasi.org.uk

Small Telescope Observing Nights (STONs)

Contact: Paddy O'Sullivan and Dave Robinson Email: ston@oasi.org.uk

These evenings enable members to gain hands-on experience of using the society's telescopes and to practice locating astronomical objects. They are organised by Paddy O'Sullivan and David Robinson and currently take place at Orwell Park Observatory. They are held on the first Tuesday of the month, starting at 20:15, *but only when there is a demand from members*. To ensure there will be an organiser in attendance, members should email the above address.

If members cannot gain access due to lack of Fob, etc., please ring the observatory telephone number **07967 519249**.

Lecture Meetings

Contact: Peter Richards lectures@oasi.org.uk

These take place in [Museum Street Methodist Halls](#), Upstairs room, Black Horse Lane, Ipswich

There is some parking at the venue but if there is no space at the venue you can drive to the end of Black Horse Lane and turn left to find a pay and display car park which charges (at the time of writing) £2 for parking between 6pm and 6am. There is also the spiral car park by the New Wolsey theatre.

Friday 14 October: Roger Pickard "Why observe variable stars?"

Roger is director of the variable stars section of the BAA.

November 11: Steve Hubbard & Malcolm Brown "Aliens – Are they out there?"

DASH Astro Events – 2016

See <http://dash.moonfruit.co.uk> for the latest details.

All DASH Astro observing sessions will take place at WESTLETON COMMON. ASOG observing sessions and locations may be arranged at the time of observation.

Unless stated all group meetings will take place at WESTLETON VILLAGE HALL from 7:30 pm

Observing sessions:

Nights: 1 & 29 Oct, 26 Nov

Solar observing: 2 July, 6 Aug, 3 Sept

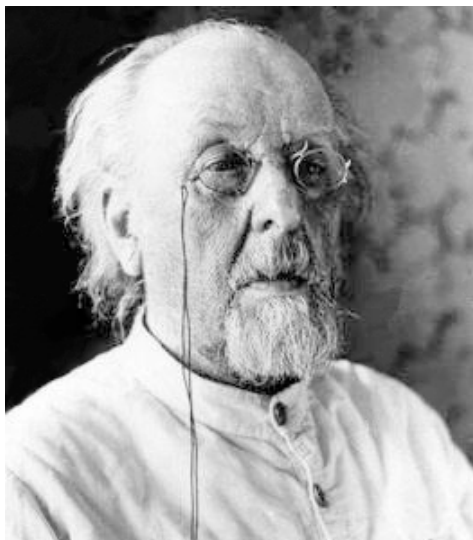


Solar observing at the annual Newbourne BBQ



OASI Library – ancient book of the month.

Andy Willshire



This month's saunter down memory lane, is a little booklet about the 'rocket man', Konstantin Tsiolkovsky, who was born on the 17th September 1857 in a small Russian town called Izhevskoye, and died on the 19th September 1935. This booklet shows many original illustrations which demonstrate the brilliance of the man.

He was a Soviet rocket scientist and a pioneer of astronautic theory. Along with The German Hermann Oberth and the American Robert H Goddard he is thought to be one of the founding fathers of rocketry. Most of his life was spent in a log house in the town of Kaluga, 200km southwest of Moscow. He led a hard childhood and at age ten, contracted scarlet fever and became hard of hearing. Because of this he was not admitted into the local elementary schools. He was therefore home schooled and read copious amounts of literature on physics and maths. In

his early teens he began to consider that space travel could be a possibility. He later came to believe that space colonization would be a method of perfecting the human race. He was inspired by the fiction writer Jules Verne and wrote theories about space travel and rocket propulsion. In 1895 having seen the Eiffel Tower he considered a space elevator. In this year he also published two science fiction stories, the main one being *On the Moon*. During his life he wrote more than 400 works of which 90 were about subjects close to space travel. His knowledge of his subject was immense and some of his rocket theories discussed the fundamentals of steering thrusters, multi stage rocket boosters and hydroponics systems, the latter was to provide space colonies with food. He developed the first Russian aerodynamic laboratory around 1897, and built a wind tunnel to determine drag coefficients of specific shapes. He was also keen on the mechanics of 'dirigibles' and built a model of an all metal one. However he was refused permission to build it full size. In 1896 he derived his 'formula of aviation' which established a relationship between the change in the rocket's speed, the exhaust velocity of the engine and the difference between the initial mass and final mass of the rocket.

In 1903 he published his most important work which was titled *Exploration of Outer Space by Means of Rocket Devices*. Using his own equation he calculated that the horizontal speed necessary for a minimal orbit around Earth was 8,000 m/s and that this was to be achieved using multistage systems fuelled by oxygen and hydrogen, both in their liquid state. Today the orbital velocity needed to maintain a stable low Earth orbit is about 7.8 km/s. In 1908 many of his papers were lost in a flood, which moved him to write even more. Between 1917 and 1935 he published four times as much literature as he had prior to these dates. This amounted to some 60 papers, mainly on physics and astronomy.

Today, a two story house on which his name is inscribed, exists in a suburb of Kaluga as a museum. It is preserved very much as it was when he was alive. When Yuri Gagarin's name was etched into history with his space flight, Russian astronauts Belyaev and Leonov went to Kaluga to pay tribute. Here they wrote "let mankind remember for ever the work and ideas of Konstantin Tsiolkovsky. It is a great pity that he cannot see with his own eyes his work and ideas being realized".

This booklet can be found in the OASI library under the category 'C'.

Reference:

Konstantin Tsiolkovsky: Novosti Agency Publishing House

Photo: By Unknown - http://www.nmspacemuseum.org/halloffame/images.php?image_id=27, Public Domain, <https://commons.wikimedia.org/w/index.php?curid=208844>

The Night Sky in August

Martin RH

All event times given are for the location of Orwell Park Observatory 52.0096°N, 1.2305°E

Other than for occultations, times are in BST (UTC+1).

Moon

Source: <http://heavens-above.com/moon.aspx>

New Moon	1st Quarter	Full Moon	Last Quarter
02 August 21:45	10 August 19:21	18 August 10:27	25 August 04:41

Sun, Moon and planets

Source: <http://heavens-above.com/PlanetSummary.aspx>

Object	Date	Rise	Set	Mag.	Notes
Sun	1	05:17	20:44		
	31	06:06	19:44		
Moon	1	03:49	19:34		
	31	04:56	19:18		
Mercury	1	07:32	21:29	-0.1	Aphelion 15 Aug Maximum eastern elongation 16 Aug
	31	08:22	19:45	1.4	
Venus	1	06:44	21:21	-3.8	
	31	08:19	20:23	-3.8	
Mars	1	16:09	23:47	-0.7	
	31	15:29	22:33	-0.2	
Jupiter	1	09:24	22:06	-1.6	
	31	08:00	20:17	-1.5	
Saturn	1	16:38	00:55	1.1	
	31	14:42	22:53	1.2	
Uranus	1	22:56	12:30	5.8	
	31	20:58	10:29	5.8	
Neptune	1	21:46	08:24	7.8	
	31	19:47	06:21	7.8	
(Pluto)	1	19:17	03:21	14.1	For those with big aperture telescopes (the Millennium scope?), Pluto was at opposition on 7 July
	31	17:18	01:20	14.2	

Meteor Showers

Source: BAA Handbook 2016 p97-99

Shower	Limits	Maximum	ZHR at Max	Notes
δ -Aquarids	Jul 15 – Aug 20	Jul 28 Aug 6	20 10	Fine southern shower with double radiant. S component is the richer. Meteors tend to be faint. Favourable.
Piscis Australids	Jul 15 – Aug 20	Jul 31	5	Southern shower in need of observation. Favourable.
α -Capricornids	Jul 15 – Aug 20	Aug 2–3	5	Long, slow fireballs are often seen. Favourable
ι -Aquarids	Jul – Aug	Aug 6	8	Rich in faint meteors. Double radiant. Favourable
Perseids	Jul 23 – Aug 20	Aug 12	80+	Rich shower of fast meteors. High proportion of bright events leaving persistent trains. Quite favourable.

Occultations during August 2016

James Appleton

Only one occultation this month. The table lists occultations during the month, of stars to magnitude 5.0, where the circumstances are favourable. The events should be readily visible in small telescopes or binoculars. The first two columns list the date and time (UT) of the occultation. Column three gives the phenomenon: 'D' denotes a disappearance and 'R' a reappearance. The table lists circumstances of disappearances and reappearances as dictated by the visibility of each phenomenon (determined by altitude, lunar phase, etc). Column four details the lunar phase ('+' for waxing and '-' for waning). Columns five and six give the altitude of the Sun and the star, both in degrees. (A negative solar altitude means that the Sun is below the horizon.) Columns seven and eight provide the star's magnitude and catalogue number.

The data relates to Orwell Park Observatory, but will be similar at nearby locations.

Please note that **times are shown in UTC** not BST.

Date	Time (UT)	D/R	Lunar Phase	Sun Alt(°)	Star Alt(°)	Mag	Star
16 Aug	00:00:22	D	0.93+	-24	15	5.7	ZC 2865

Paul's Astronomy Podcast for August

Paul Whiting FRAS Podcast, August 2016 www.oasi.org.uk/2016_08_pod.mp3

Bill'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>

David's Radio Broadcast

4th Monday of the month, 2.40pm on the Lesley Dolphin show on BBC Radio Suffolk.

Visible ISS passes $\geq 15^\circ$ max altitude

Martin RH

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

Times are BST. Predictions are approximate (18 July) due to craft adjustments. Check the day before.

Date	Mag	Start			Highest point			End		
		Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.
01 Aug	-3.3	21:25:08	10°	WSW	21:28:21	59°	SSE	21:31:34	10°	E
01 Aug	-3.5	23:01:27	10°	W	23:04:43	86°	S	23:06:28	25°	E
02 Aug	-1.3	00:37:52	10°	W	00:39:02	19°	W	00:39:02	19°	W
02 Aug	-3.4	22:08:19	10°	W	22:11:36	85°	S	22:14:52	10°	E
02 Aug	-3.1	23:44:45	10°	W	23:47:36	54°	SW	23:47:36	54°	SW
03 Aug	-3.5	22:51:38	10°	W	22:54:53	75°	SSW	22:56:10	34°	ESE
04 Aug	-3.4	21:58:29	10°	W	22:01:46	84°	S	22:04:45	12°	E
04 Aug	-2.3	23:34:57	10°	W	23:37:19	34°	WSW	23:37:19	34°	WSW
05 Aug	-3.2	22:41:46	10°	W	22:44:58	56°	SSW	22:45:55	38°	SE
06 Aug	-3.4	21:48:35	10°	W	21:51:51	72°	SSW	21:54:30	14°	ESE
06 Aug	-1.6	23:25:12	10°	W	23:27:05	22°	WSW	23:27:05	22°	WSW
07 Aug	-2.6	22:31:53	10°	W	22:34:57	37°	SSW	22:35:42	32°	S
08 Aug	-3	21:38:39	10°	W	21:41:51	52°	SSW	21:44:19	15°	SE
09 Aug	-1.8	22:22:07	10°	W	22:24:46	23°	SSW	22:25:33	21°	S
10 Aug	-2.3	21:28:43	10°	W	21:31:43	33°	SSW	21:34:13	13°	SE
12 Aug	-1.4	21:18:55	10°	W	21:21:27	21°	SW	21:23:58	10°	SSE

Iridium flares

Too many to list but see <http://heavens-above.com/IridiumFlares.aspx>

Notes from the BAA electronic bulletin

Royal Astronomical Society Apartment Public Opening Times

17 September 10:30–16:30. All of the learned societies based at Burlington House are participating in *Open House London 2016*, and will each provide access to areas which are not normally accessible to visitors. RAS staff will be on hand to explain the architectural features of the building, the history of the society, and exhibit some of our fascinating artifacts. This will include some of the historically significant items in our [BAA] library.

OASI Member of the Year Competition

- Open to any non committee member (at time points earned)
- Runs from 1st September to 31st August each year
- Winner gets a free membership for the following year
- It is the members responsibility to check that they have been credited the points for a particular event

Activity	Points	Activity	Points
Helping at an OASI outreach event	10	Writing a newsletter article (per page)	3
Giving a workshop/monthly sky notes	20/10	Introducing a new member	5

OASI Member of the Year Competition

	Total points
Adam Honeybell	10
Alan Smith	108
Andy Gibbs	71
Bill Barton	136
Charlie Green	20
Gerry Pilling	3
Jeremy Startup	20
Joe Startin	43
Joe Walsh	10
Mike Nicholls	76
Mike Norris	23
Mike O'Mahoney	40
Neil Short	6
Nicky Richards	40
Pete Richards	30
Richard Gruber	10
Tina Hammond	20

Next month – the Month of Reckoning!

If you disagree with my calculations, please send me the evidence by 15 August.

Martin RH

Web links

<http://vizier.u-strasbg.fr>

VizieR provides access to the most complete library of published astronomical catalogues and data tables available on line organized in a self-documented database. Query tools allow the user to select relevant data tables and to extract and format records matching given criteria. Currently, 15131 catalogues are available.

The BBQ toys

Martin R-H



Following the talk on Rocketry in June, Martin Cook developed his patent fizzy drinks bottle launcher.

In the interests of science (of course) some experimentation had to be undertaken to evaluate pressure vs height.

190psi (13.1bar) worked well.

There's a video coming soon, on the web site, of a full launch.

But 220psi (15bar) was too much!



The evening was rounded off with Paul's **gAstronomy** talk on oriental cooking and Bingo! 3 times winner – Trustee, Mr David Payne. Then outside for a quick views of Moon, Mars, Saturn & Jupiter before the mosquitoes won.

Astronomy is Looking Up

Paul Whiting

Ipswich Institute are once again running an astronomy course starting in October. The course will be held in the Admiral's House, 13 Tower Street, Ipswich. Further details below and booking at 15 Tavern Street, Ipswich.

Mondays 18.30 - 20.30

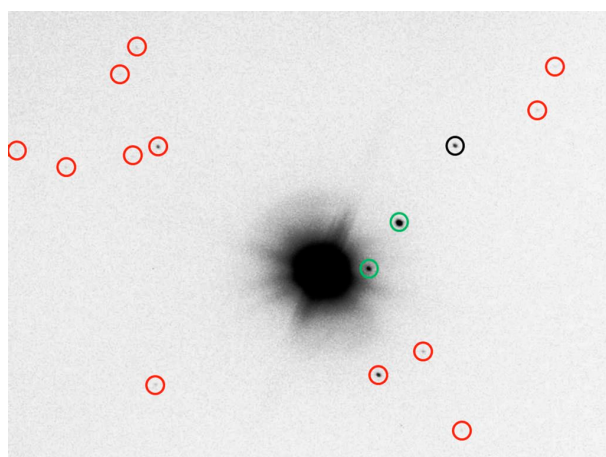
With astronomy featuring more and more on our TV screens, have you ever wondered what it is all about? This introductory course will introduce the basics of a number of different facets of this interesting science and hobby. You do not need a telescope to take part (although you will probably want to get one afterwards!). You just need an enquiring mind.

- Course Tutor: Paul Whiting
- Course Duration: 10 weeks
- Course dates: 03 Oct – 05 Dec
- Half Term: 07 Nov
- Price: £71
- Ipswich Institute Members Price: £47
- Concessions*: £52

*The concessionary rate is available to anyone in receipt of means-tested benefits.

Satellites of Saturn

There's been a recent debate of this photo, taken by David Murton, with contributions by Bill Barton, James Appleton *et al*.



Red rings indicate stars matched to stars in the DSS image. Green rings mark the satellites: Rhea the fainter and Titan the brighter. I cannot identify the object marked with a black ring. Can you identify it?

It is orientated as taken with a reflector scope. Time was 23:20 on 5th July

Paper version readers: You'll need to view online for colour. Ed.

PS my 0.833p is Iapetus.

Satellites of Saturn (ordered by magnitude)

Name	Magnitude	Sidereal Period (Days)
Titan	8.3	15.9454
Rhea	9.7	4.5175
Tethys	10.2	1.8878
Iapetus	10.2-11.9	79.3302
Dione	10.4	2.7369
Enceladus	11.7	1.3702
Mimas	12.9	0.9424
Hyperion	14.2	21.2777
Janus	14.5	0.6945
Epimetheus	15.7	0.6942
Prometheus	15.8	0.6130
Phœbe	16.4	550.48
Pandora	16.5	0.6285
Atlas	18.0	0.6019
Helene	18.4	2.7360
Telesto	18.5	1.8878
Calypso	18.7	1.8878
Pan	19.0	0.575

Observation obscuration

Martin RH



Solar Day at Felixstowe (not) – Stoicism was the order of the day

L-R: Bill, Pete, Paul, Nicky John, Roy



Rainbow at Newbourne, Monday 11 July



**Solar Day (intermittently) outside UCS on 26 June
with Ed Sheerham**



Photos by Martin Richmond-Hardyt