OASI News

The newsletter of Orwell Astronomical Society (Ipswich)

OASI @ Latitude 2023

Image: Mike Whybray

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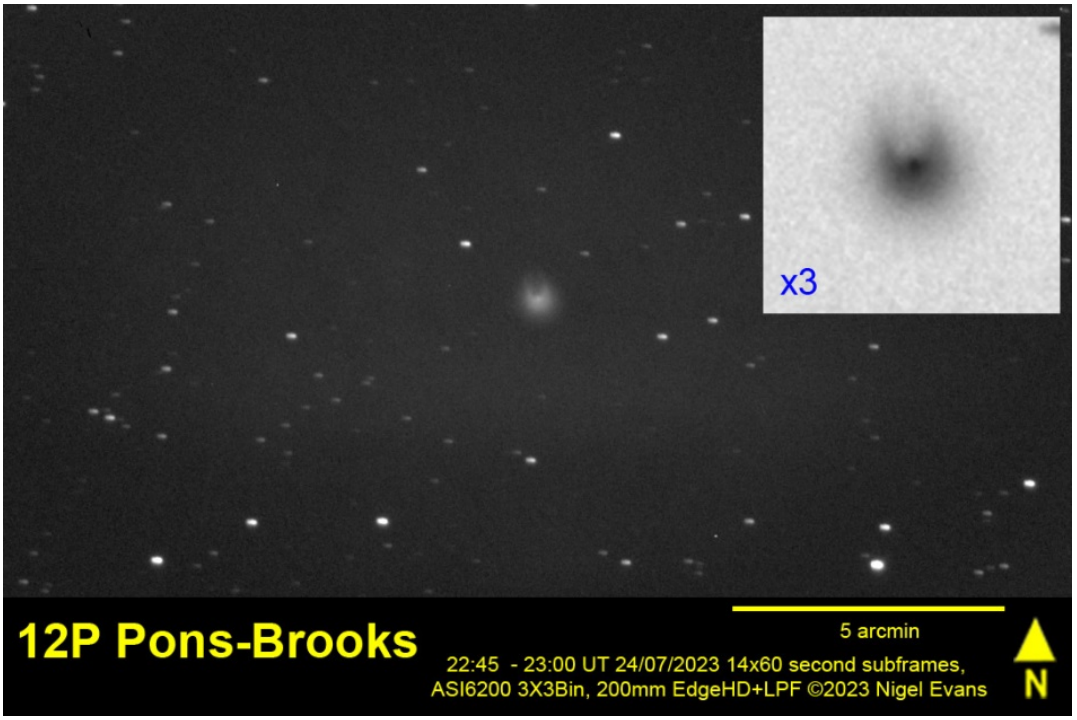

Comet 12P Pons-Brooks, a periodic comet that was once observed and studied by our own Victorian astronomer, John Isaac Plummer. Photo by member, Nigel Evans.

Society Notices

Dear Members,

As our cool, wet, Summer, draws to a close, we see a return of longer nights and truly dark skies. If you are able to observe from a dark sky site, the Milky Way is now at its best. Saturn reaches opposition at the end of August and although the rings are now closing up, (they will be edge-on in 2025), the planet is gaining in elevation after years of hugging the horizon. If you are out observing and manage to capture some images, it would be great if you could send them to us for the website, newsletter and Facebook page.

Let's hope that we, at last, get some clear skies and I look forward to meeting you at one of our meetings in September.

Andy Gibbs, Chairman

Society Contact details

Email queries: info@oasi.org.uk

Facebook: Orwell Astronomical

Twitter: @OASIpswich

YouTube: https://www.youtube.com/channel/UCHgxe3QAeRVWf7vkjKkCl2Q

Members-only message board

https://groups.io/g/OASI

Observatory (meeting nights only) 07960 083714

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

A Perseid Meteor (stock image)

Access into the School Grounds and Observatory Tower

Orwell Park School have changed our access route to the observatory.

The new route will be 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.

Articles for OASI News

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

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."

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

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Committee 2023

Chairman	AndyGibbs	Set overall agenda for OASI, Chair committee meetings, Press and publicity
Secretary	Roy Gooding	Outreach meetings (jointly with Chairman), observatory decoration
Treasurer	PaulWhiting	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
	MartinCook	Membership, Tomline refractor maintenance & user testing
	Matt Leeks	Safety & security
	Peter Richards	Lecture meetings, Email distribution lists
	John Wainwright	Equipment curator
	Mike Whybray	Astronomy Workshops, Child protection officer, Orwell Park School Astronomy Club
	Andy Willshere	Librarian
		Newsletter, OASI @ Newbourne
		For newsletter and Newbourne please contact Paul Whiting,

Committee Meeting

The next Committee Meeting will be on Friday 1st September at 8:00pm via Zoom. All members welcome.

Welcome to new members

no-one this month

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.

If you want to easily add OASI Events to your own computer/phone/tablet calendar application click this button on the website Events page (bottom right of the calendar) 

or use this address to access this calendar from other calendar applications:

https://calendar.google.com/calendar/ical/1jhs9db71ncki4sojo7092vfvc%40group.calendar.google.com/public/basic.ics

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

Date, Time & Location	Contact	Event
Weekly, every Wednesday, from 20:15	Martin Cook, Roy Gooding	Observatory open
Friday 1st September 20:00	Andy Gibbs	Committee Meeting via Zoom usual Zoom details
Monday 11th September from 19:30	Paul Whiting	OASI@Newbourne Beginners and new members welcome
Thursday 21st September 20:00	Paul Whiting	Monthly Zoom meeting - Recorded Talk: Dr Wolfgang Steinicke, *William Herschel – Discoverer of the Deep Sky*.
Monday 25th September from 19:30	Paul Whiting	OASI@Newbourne Bill Barton : Night Sky Guide Beginners and new members welcome

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.

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

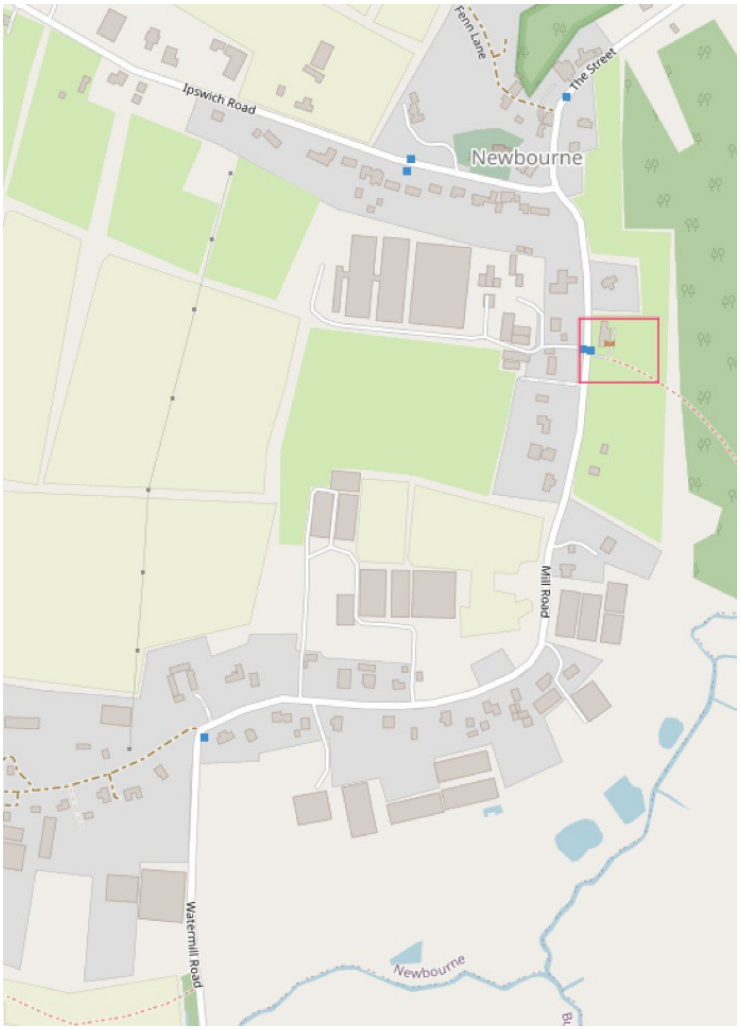
http://www.oasi.org.uk/OASI/Membership.php

Newbourne dates for 2023

September	11	25 (S)
October	9 (T)	23 (S/A)
November	13	27 (S)
December	11 (A/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).



Summer Lectures – via Zoom

Thursday 21st September 2023 – Zoom Talk (Recorded)

"William Herschel – Discoverer of the Deep Sky"
with Dr Wolfgang Steinicke

Starting 20:00. Standard Zoom meeting details

BAA news & webinars

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

2 September 2023	Variable Star Section Meeting
16 September 2023	Variations on an Exoplanet theme – Online Meeting
22 September 2023	BAA Autumn Meeting 2023 – Practical Amateur Astronomy
25 October 2023	BAA AGM 2023
9 December 2023	BAA Christmas Meeting 2023

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.

Fri. Sept. 1st. **19:30 BST**	**Dr. Asayama, Shinichiro** Square Kilometre Array Observatory at Jodrell Bank National Astronomical Observatory of Japan	Square Kilometre Array Observatory at Jodrell Bank - an update and an innovative **and** a fun solution for hydrogen line reception.
Fri. Oct. 6th **19:30 BST**	**Marcus Leech** President. Canadian Centre for Experimental ***Radio Astronomy***	**Amateur SDR based interferometry**, hardware and software. (Getting started)
Monday Nov. 13th **19:30 GMT**	**Prof. Sean Paling** STFC UKRI	Deep Science at Boulby Underground Laboratory **The search for Dark Matter and Beyond**.
Christmas lecture **Fri. Dec. 1st.** **19:30 GMT**	Prof Clive Tadhunter Department of Physics and Astronomy University of Sheffield	**Active Galactic Nuclei** (AGN) emit at least as much radiation by themselves as the integrated light of all the stars in a typical galaxy, yet this radiation is produced in a region that is smaller than the solar system.

Introductory Astronomy Course for Members

I will be running an introductory astronomy course for beginners, over 9 one hour sessions on Zoom.

The course will cover the following:

History of Astronomy (5th Sept)
The Solar System (12th Sept)
Earth Based Phenomena (26th Sept)
The Big Bang (3rd Oct)
Exo-Planets and Life (17th Oct)
Telescopes (31st Oct)
Radio Astronomy (7th Nov)
Exploring the Solar System (21st Nov)
Practical Astronomy (28th Nov)

Subject to numbers, the course will start on Tuesday 5th September at 19:00

Please register via email to treasurer@oasi.org.uk

The Night Sky in September 2023

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

Sun, Moon and planets

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

September 2023

Object	Date	Rise	Set	Mag.	Notes
Sun	1	06:06	19:43		
	30	06:54	18:36		
Moon	1	07:41	20:32		Last Quarter 06 September 23:21 Apogee 12 September 16:43 New Moon 15 September 02:40 First Quarter 22 September 20:32 Perigee 28 September 02:00 Full Moon 29 September 10:58
	30	08:05	19:02		
Mercury	1	07:21	19:24	3.3	
	30	05:26	18:17	-1.0	
Venus	1	04:12	17:55	-4.3	
	30	02:59	16:53	-4.4	
Mars	1	08:28	20:21	1.8	
	30	08:23	18:57	1.7	
Jupiter	1	21:44	12:27	-2.5	
	30	19:48	10:27	-2.7	
Saturn	1	19:39	05:34	0.4	
	30	17:41	03:29	0.6	
Uranus	1	21:54	13:14	5.7	
	30	19:59	11:18	5.7	
Neptune	1	20:14	07:50	7.8	
	30	18:19	05:51	7.8	

Occultations during September 2023

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 September 2023

Shower	Normal limits	Maximum	ZHR at Max	Notes
Aurigids	29/08 - 04/09	01/09	6	
Sept Epsilon Perseids	05/09 - 28/09	09/09	5	
Southern Taurids	10/09 – 20/11	10/11	5	Few, very slow meteors
Epsilon Geminids	29/09 - 02/11	18/10	3	

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 18 August.

Comet	Brightness	Date of last reported observation	Angular separation from Sun	Constellation
C/2023 E1 ATLAS	9.5	2023-Aug-17	131°	Cygnus
C/2020 V2 ZTF	9.9	2023-Aug-17	103°	Eridanus
C/2021 T4 Lemmon	10.2	2023-Aug-16	86°	Libra

Visible ISS passes >30° max altitude for September 2023

Source: Starry Night Pro Plus v8

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

Date	Mag	Start	Highest Point			End
		Time	Time	Az	Alt	Time
01/09/2023	0.55	02:55	03:01	S	39°	03:07
02/09/2023	2.53	03:44	03:49	E	35°	03:55
03/09/2023	-0.03	02:56	03:01	SSW	55°	03:07
04/09/2023	1.95	03:44	03:50	E	43°	03:55
05/09/2023	1.2	01:19	01:25	ESE	32°	01:30
05/09/2023	0.11	02:56	03:01	WSW	54°	03:07
06/09/2023	1.32	03:44	03:50	ESE	48°	03:55
07/09/2023	0.87	01:19	01:25	ESE	43°	01:30
07/09/2023	0.31	02:56	03:02	W	49°	03:07

08/09/2023	0.39	00:31	00:36	SSW	39°	00:42
08/09/2023	0.98	03:44	03:50	SE	42°	03:55
09/09/2023	0.89	01:19	01:25	E	46°	01:30
09/09/2023	0.29	02:56	03:02	W	47°	03:07
10/09/2023	0.23	00:31	00:36	WSW	52°	00:42
11/09/2023	0.91	01:19	01:25	E	43°	01:30
11/09/2023	0.37	02:56	03:01	WSW	39°	03:07
11/09/2023	0.77	22:54	23:00	ESE	33°	23:05
12/09/2023	0.25	00:31	00:36	W	60°	00:42
12/09/2023	0.76	22:06	22:11	S	33°	22:17
13/09/2023	0.92	01:19	01:24	ESE	37°	01:30
13/09/2023	0.99	22:54	22:59	E	32°	23:05
14/09/2023	-0.01	00:30	00:36	WSW	70°	00:42
14/09/2023	0	22:05	22:11	S	59°	22:16
16/09/2023	-0.19	00:30	00:36	SSW	61°	00:41
16/09/2023	-0.13	22:05	22:10	ESE	70°	22:16
16/09/2023	1.76	23:41	23:47	W	32°	23:53
17/09/2023	1.76	21:16	21:22	WSW	39°	21:27
18/09/2023	0.56	00:30	00:35	S	33°	00:41
18/09/2023	0.17	22:04	22:10	E	50°	22:16
18/09/2023	1.01	23:41	23:47	WSW	38°	23:52
19/09/2023	1	21:16	21:21	W	60°	21:27
20/09/2023	0.66	22:04	22:09	ESE	33°	22:15
21/09/2023	0	21:15	21:21	SSE	83°	21:26
23/09/2023	0.18	21:14	21:20	SE	45°	21:25

Starlink passes

https://heavens-above.com/AllPassesFromLaunch.aspx

For a dynamic 3-D display, see https://heavens-above.com/StarLink.aspx

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

Forthcoming Outreach Programmes

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.

Friday 22nd September

Star Party at Thomas Mills School, Framlingham
A night time observing event, with lecture option if wet. More details to follow nearer to the date.
Private Event

Stars of Stowmarket

On Sunday 23 July, I attended with Mandy Gibbs and Bill Barton, a performance by the cast of Footprints Theatre Company's, "Stars of Stowmarket".

This interesting afternoon involved a time travelling, walking performance around the streets of Stowmarket, meeting famous characters from the past, including the astronomer Alice Grace Cook. Grace was brought to life by an excellent performance by Clare McCall

Andy Gibbs.

Six go mad at Latitude

or one goes to sleep in the Green Room

An interesting day at latitude, the intrepid six, in two cars, mastered (eventually) the labyrinthine parking and ticketing arrangements. It took a while but it worked. It was around noon, the time we were instructed to arrive.

We thought we would investigate the Listening Post's Green Room to get our bearings. The rain hadn't started at this point, so we went back to the Listening Post tent to wait for Chris Packham to appear. Alas I had forgotten that there were no seats available - anywhere. I didn't like the thought of 90 minutes' standing, so I left the others and retired back to the Green Room and the comfy chairs, free booze and crisps - not forgetting the Freddos!

Then the rain started. So, other than a brief excursion around the food stalls about 2 pm, here I sat in the next nine hours!!!

The Green Room

It was a fantastic time for people watching. Most of the comedians on the bill popped in, but first I had a nice little conversation with Chris Packham, and later, Pete and I were served a glass of wine each by Shaparak Khorsandi. At other times the likes of Mark Watson, Ivo Graham, Shazia Mirza and John Pienaar all looked in. There were some others I recognised but can't remember their names, and yet others I'd never heard of (Pappy's Flatshare Showdown?)

The main benefit of the Green Room, even beyond the comfy chairs, was the luxury toilets. They were indeed, especially compared to the mass portaloos!

The others (Pete, Nicky, Andy G, Mike W and Bill) appeared at various times to keep me company.

10 PM finally arrived and Bill fetched his telescope - we only needed one as it was still pouring down with rain. The talks were in the Book Shop venue, which was adjacent to the Listening Post tent. Kevin Fong and Stuart Clark were primed to go on a bit longer each instead of handing over to us. The talks went down well, and we did have a number of very sensible questions at the end.

The Book Shop Venue

Kevin Fong in full swing, with Bill's scope

That's probably enough name dropping, so around 11.30 we started to wend our way home, through the mud. I finally got into bed around 1.45 am.

Paul Whiting

Images – Mike Whybray

Memories of Alan John Smith (1949-2023)

Remembered by Colin Smith

There is a poem that starts *Not how did he die, but how did he live?* It is not possible to do justice to Alan's life in a short space of time, so apologies in advance for the significant people, places and events omitted.

Alan John Smith, Bachelor of Science, was born in late 1949 to Graham and Jean, who lived in a council flat in Ipswich. Although this was just after the Second World War, with rationing and austerity still in place, Alan thrived. He was a bright and inquisitive child who attended the infants' school opposite where he lived.

When he was seven years old, there was a new addition to the family: brother Colin.

Alan's intelligence was evident when, aged 11, he won a scholarship to the only grammar school in the area: Northgate Grammar School for Boys. And it was there that he met someone who was to become a lifelong close friend, confidant and colleague: Chris Albins, or *Alby*.

The school was separated from Northgate Grammar School for Girls by a partition modelled on the Berlin Wall, including a chain link fence which ran the entire length of the extensive playing fields. However, the buildings were joined at one point, the swimming pool, outdoors and unheated, of course. Alan had by this stage developed a mischievous sense of humour... Where better to try out his new-found knowledge gained from a chemistry lesson, that potassium permanganate crystals turn water pink? The swimming pool did indeed turn pink and the culprit was never traced.

With regard to extra-curricular activities, Alan enjoyed going to the after-school metal-work club. Away from school he joined the 17th Ipswich Scout troop, where he met someone who, he said, was the second person to have a profound effect on his life: the troop leader, Roy Goody, or "Skip" as he was known. Roy treated all the boys like sons; instilling common sense, discipline, a sense of fair play and a good work ethic. The Alan who we all knew and loved grew up as he did, in great part because of Skip.

Alan left school, aged 16, with a clutch of "O" levels relating mostly to practical subjects. He later felt that he, and others like him, had been "filtered out" by the school from continuing into the 6th form and going on to university, which, to use his words, gave him a bit of a chip on his shoulder (although this was later rectified).

Alan and Chris joined General Post Office Telephones, (later British Telecom and then BT), where they started work as linemen, up telegraph poles in all weathers. Both progressed to work in Ipswich telephone exchange. Electronics was still in its infancy at this time, and there were two floors in the exchange which held bank upon bank of electro-mechanical switch gear. This space was known as the Auto Room, and the camaraderie that Alan found there with other engineers meant a lot to him. There was also a manual switchboard in the building, staffed by many (mostly female) operators. There are former colleagues of Alan who could tell many stories about him. The radio-controlled rat which caused havoc as it ran through the switchboard is just one example.

Aged 20, Alan met and married Susan in 1970. Their first daughter, Angela, was born later that year. A second daughter, Toni, arrived three years later.

Alan rectified the resentment from his schooldays when the Open University came into being in the early 1970s. He enrolled on a course which nowadays would be *called Earth Sciences*, or something similar. Not having the prerequisite qualifications, he first had to do a foundation course, which for him was a voyage of discovery! It included topics such as geology, geography, and oceanography, to name but a few. Always having been curious

about how things worked, and "what made the world go round", he was in his element (if you'll pardon the pun). He applied himself to his part-time studies for several years, and eventually was awarded a BSc, alongside developing a full-time career and raising a family.

Alan and Susan separated in 1994. He found a new partner, Ann, with whom he shared many interests, including geology, theatre and walking and, after a while, they settled together in Grundisburgh. Sadly, five years later, circumstances dictated that Ann move back "up North"; however, the two remained friends. Then, some 20 years ago, Alan met Christine, and the two have been partners ever since.

Throughout his life, Alan loved adventure and adventure holidays. He visited Iceland, the Arctic and Coober Pedy, the Australian mining town where most of the inhabitants live underground due to the unbearable heat. He fell in love with New Zealand and investigated emigrating there. On another occasion, he was travelling through a remote part of Peru with a small group when their vehicle was stopped by a gang of armed men. The travellers were "invited" to be "guests" of the gang and taken into the jungle. They had fallen into the hands of *The Shining Path*, a Peruvian revolutionary organisation that endorsed Maoism and employed guerrilla tactics and violent terrorism. Alan was terrified. Fortunately, he was not treated badly, and was released unharmed a few days later. Nobody knows why - perhaps the kidnappers thought he was just a harmless eccentric Englishman not worth the trouble...

Alan's career continued to progress and he became a Systems Engineering Manager at the BT Research Laboratories, which, in the mid-1970s, had relocated from Dollis Hill, North London, to Martlesham Heath. He stayed there until retirement. Following retirement, Alan became a very active member of Ipswich Transport Museum, where he held several responsibilities over the years. He could turn his hand to anything and could fabricate, renovate and restore items which otherwise were lost causes. Ironically, when he became ill, he was one of a small team working on the restoration of a Daimler hearse, and he said he would probably be its first occupant if he didn't recover. Alas, time overtook him.

As Alan reached middle age, he became more cynical and world weary. Gone was the avid football fan of his earlier years. No longer the mischievous twinkle in his eye. He became a self-confessed *glass half empty* person and would always expect the worst to happen. At the Transport Museum when something went wrong, it was referred to not as a "slip up", but as a "Smith up"; and, at OASI, he answered to the moniker "Mr. Grumpy".

But he lost none of his ability to turn his hand to anything and was always ready to step in if someone needed help. He still soaked up knowledge like a sponge. As somebody remarked just after his death, Alan really did know something about everything.

Although never a religious man, Alan had come to believe, from all the places he'd been and things he'd seen, that the Ancients, whether Aboriginals in Australia, Bronze Age Europeans or long gone South American races, had a close spiritual connection with the life forces that make up the planet. He felt the same way and thought Modern Man had lost that connection. To use his words, people didn't realise what they were concreting over.

Finally, I must pay tribute to daughter Toni, on whom, in his final weeks, Alan had become VERY reliant, both physically and psychologically. He went through the mill and she was with him every step of the way.

But let's think *Not how did he die, but how did he live?*

Remembered by Martin Cook and James Appleton

Alan joined OASI in 1975. He rapidly established himself as one of the most active members of the Society, a distinction which he retained throughout his membership, organising and supporting many activities.

In the 1970s, renovation of Orwell Park Observatory was in full swing and Alan, possessing the necessary DIY skills, was keen to assist. When the walls of the equatorial room at the top of the observatory needed re-plastering, he realised that a water supply would be required. The only water supply in the building was a low-pressure tap at the base of the observatory tower, so he set up a pump by the tap to lift water to a large butt in the equatorial room for use by the plasterers.

The Tomline Refractor was still driven by the original, 1874-vintage mechanism which needed winding every 15 minutes. In 1978, Alan and his friend Chris Albins replaced the mechanical drive with an electric motor, controlled by a variable frequency oscillator, which could be adjusted so that the rate at which the telescope tracked the sky precisely offset the rotation of the Earth. This enabled the telescope to be left to track the heavens all night without intervention, revolutionising its use.

Alan (holding the notice) and fellow members of OASI at Durness, 1982.

Alan arranged trips to observe aurora to Durness in 1980, 1981 and 1982 and to Orkney in 1989. The trips were never without incident! The 1980 trip started with a 22-hour, 787-mile journey in a minibus to a campsite in Durness to be greeted by the campsite manager saying: *That'll be £21 and keep your cars off the grass*. Three nights later, a fierce storm developed, and the group spent all night holding down two frame tents which were lashed to the minibus and a car. By the time morning came, the campsite looked like a war zone, with tents blowing around like kites. Under Alan's command all present quickly took down the damaged tents and stowed them in the minibus. Later, the group's insurers advised that they would pay a claim only for gale force 10 or above. A query to Cape Wrath lighthouse elicited confirmation that the group had endured gale force 11 (stronger than the *great storm* of October 1987), and the claim was settled.

Alan often drove the minibus on OASI excursions to the RGO at Herstmonceux and the Royal Observatory Greenwich. He was also a keen supporter of Ipswich Town and would always follow the results. One Saturday, he drove a minibus full of members of OASI to Herstmonceux for an open day. In the afternoon, while attending a lecture, he secreted between his legs a Sinclair 3" black and white TV with an earpiece so that he could keep up to date with the Ipswich Town game. Totally engrossed with the final score rather than the lecture, he suddenly jumped out of his seat punching the air and shouting *Yes!* as the result was announced, only to quickly remember where he was. The return journey too was noteworthy, as the alternator of the vehicle failed at Chelmsford. Alan realised that he could minimise the drain on the battery and continue the journey to Ipswich by turning the lights off and illuminating only the side lights and rear lights whenever a vehicle approached from behind, then turning them off again once the vehicle had passed. In this manner, the party limped back to Ipswich until the vehicle finally broke down in the town centre.

Keen to get closer to space, Alan purchased a reusable rocket. Some test firings were conducted on Rushmere Heath, reaching a height of 2000 feet. However, when a potato was added to simulate a payload, the rocket barely

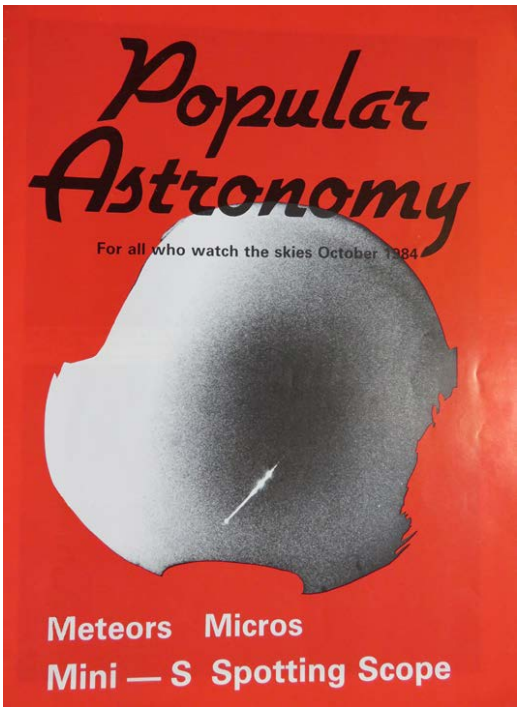
took off, flew over some children playing football and buried itself in the ground. Another successful launch occurred just as a policeman appeared and the launch crew, Alan and Martin Cook, had to quickly stamp out the smouldering launch pad. Standing perfectly still over the burnt ground, Alan showed the policeman the rocket kit, to demonstrate that it was legal, and the constable proceeded happily on his way. To mitigate the cost of refilling the rockets, some home-made propellant was used. Test firings were carried out by launching rockets along the washing line at Martin's home, but this was promptly stopped when Mrs Cook arrived home early and found black soot on the line.

Like most amateurs, Alan was something on an astronomical *omnivore*, and observed many types of phenomena. His first observations reported after joining OASI were of the lunar total eclipse of 18 November 1975, which he photographed on slide film. His more notable observations and observing projects were as follows.

He was greatly interested in meteors and meteorites and was a member of the British Meteor Society (BMS). One of his early major projects with OASI was construction and operation of a meteor camera. In 1976, the committee of OASI purchased from one of the Society's members a Zorki 4K camera and lenses and, in late 1977 offered it for loan to anyone who could offer a dark-sky location and would promise to operate it regularly. Alan was on 24-hour call-out at the time, and accepted the offer with alacrity. Initially, the camera had to be operated manually and it is a testament to Alan's diligence that, on every clear night, he prepared and loaded film, mounted the camera, attended it every hour to terminate the exposure and start a new one, then developed the film in his darkroom, projected the images on a screen to search manually for meteor trails and other anomalies and, finally, reported his results.

Manual operation of the system was a laborious chore, and this provided a great incentive for Alan to introduce automation. Exhibiting the characteristic ingenuity and resourcefulness that were apparent in all his projects, he developed the system to operate without human intervention, under the control of electro-mechanical programmers and electronics. Ultimately, the equipment even incorporated a rain detector which positioned a weatherproof cover over the camera when it detected rain or heavy dew.

Unfortunately, after 650 hours of exposures totalling 2187 frames over almost eight years, light pollution around Alan's house had increased to such an extent that the camera was no longer viable, and he was forced to retire it in mid-1986.



Cover of Popular Astronomy, October 1984, featuring Alan's image.

The camera captured a variety of meteors and fireballs, together with, of course, artificial phenomena such as fireworks, aircraft trails and satellite trails. The most celebrated image was undoubtedly taken on the night of 23-24 April 1984; it recorded a magnitude -14 meteor with trajectory approximately 10 km off the east coast, from Aldeburgh to Hemsby. The image was featured on the front cover of the October 1984 edition of *Popular Astronomy*, although it remains a mystery as to how the editor obtained it, as Alan himself did not provide it.

The other claim to fame of the meteor camera was that it *almost* captured the UFO involved in the *Rendlesham Incident*. Readers who are not believers in UFOs should skip the remainder of this paragraph… The incident took place at approximately 03:00 on 26 December 1980 when a UFO landed in Rendlesham Forest, close to RAF Woodbridge, witnessed by several US servicemen. Alan was operating the camera on the night of 25-26 December

but, unfortunately, cloud cover forced termination of operations at 00:15. How close he came to recording something truly exceptional, we shall never know…!

In the early 1980s, the American astronomer Hal R. Povenmire requested observations of meteors supposedly associated with an Upsilon Pegasids shower in early August. The shower was, and remains, controversial, with typical maximum rates barely above the background level of sporadic meteors. In 1983 and 1984, Alan searched for evidence of Upsilon Pegasids in the images recorded by the camera, but without success.

Imaging technology has made huge strides since the days of chemical films and darkroom processing in the mid-1980s. Recognising the potential offered nowadays, in 2018, Alan constructed another meteor camera, this time based on the latest technology, and re-established communications with Hans Betlam in the Netherlands, with whom he had collaborated in the 1980s. Through Hans, Alan became a member of the Dutch Meteor Society (DMS), contributing observations from the western edge of the sphere of interest of the Society. His observations, always provided promptly, were of high quality and considerably enhanced Hans' ability to compute accurate meteor trajectories.

Enlargement showing NOSS 3a and 3c, 23:08-23:13 UT on 19 July 2018.

One of Alan's first images with the new camera caught a US military surveillance double-satellite, NOSS (Naval Ocean Surveillance Satellites) 3a and 3c. The two satellites are tethered together and are co-orbital. Although satellites are a troublesome nuisance from the point of view of observing meteors, identifying and researching the numerous craft imaged by the camera introduced another area of interest to the project.

Once again, Alan brought his practical skills to bear to optimise the results obtained, and developed the system through various iterations of cameras, lenses, electronics and mounts. His enthusiasm for the project was infectious, and three other members of OASI and two non-members followed his example and began operating meteor cameras, with Alan acting as the central clearing point for observations and queries, and the point of liaison with the DMS.

Another of Alan's long-term interests was lunar occultations. An occultation occurs when the Moon (or other body) passes in front of a more distant object such as a star or planet, temporarily obscuring the latter from view. A special case of an occultation, a *grazing occultation* or simply *graze*, occurs when the geometry is such that the northern or southern limb of the Moon just skims in front of the more distant object. A graze is visible from a narrow path on the surface of the Earth, and a successful observation therefore requires organisation and logistics, to select a suitable observing location, arrange access, and marshal potential observers such that all arrive, suitably equipped, in the agreed place at the appropriate time.

During the early-mid 1990s, interest in observing occultations grew among members of OASI. Alan was at the forefront of observing occultations via the Tomline Refractor. Frustrated by the frequent occurrence of glare as the Moon drew close to the star to be occulted, in 1993 he developed a very simple solution, a tube, painted matt black, fitted inside the eyepiece draw tube of the instrument, to reduce the field of view and minimise glare. Inevitably, the device became known as the "Smith Tube".

Observers of the grazing occultation of Venus.
L-R: Martin, Roy, Mike and Alan.

Alan's interest in grazes and his natural organising abilities made him the obvious choice as OASI's Grazing Occultation Coordinator. He took up the post in 1979 and stood down 41 years later, after organising and attending numerous observing trips. In the early days, he obtained predictions of graze paths from the BAA or RGO; they were often none too accurate and, unsurprisingly, few observing trips were successful. One notable exception was the graze of Venus on 05 October 1980, which Alan, together with OASI members Martin Cook, Mike Barriskill and Roy Gooding observed from near Horning in Norfolk.

By the early 2000s, predictions of grazing occultations were much improved in accuracy and, following a successful observation of a graze of υ Leonis on 30 December 2007, interest among members of OASI in observing the phenomena increased markedly, observing trips were well-attended and, under Alan's leadership, many good observations were obtained and reduced.

Sometimes, the only suitable observing location would be situated on private land, and the landowner had to be traced, and then engaged in negotiations to grant access. This could necessitate door-to-door enquiries and other sleuthing skills! Inevitably, cold calling a landowner to request access for a party of astronomers in the middle of the night invited initial scepticism and uncertainty as to the nature of the scam – surely, there must be a scam! Alan invariably managed to overcome the initial reaction and, on some occasions, when the hour was not too unsociable, even persuaded the landowner to attend the observation!

However, not all observations of occultations were as well-executed and successful as that of graze of Venus. On 03 July 1989, Alan and Martin Cook used the Tomline Refractor to observe an occultation by Saturn's principal moon, Titan, of the star 28 Sagittarii. The disappearance phase proceeded as expected, with Titan and the star appearing to coalesce, Titan eventually hiding the star. Then the star briefly reappeared, then disappeared again, and remained invisible. What could have happened? The explanation was soon apparent. Two occultations had occurred! Titan had obscured the star, and the telescope, rotating to follow the apparent motion of the sky, had moved away from the aperture. Yes, the observers had forgotten to rotate the dome to keep the aperture in front of the telescope. Doh!

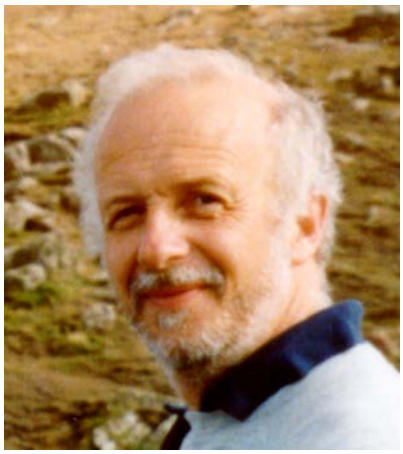
Alan at Siding Springs Observatory, 08 April 1986.

The return of Halley's Comet in the mid-1980s created much excitement in the astronomical community and more widely. Alan was one of the first members of OASI to observe the comet, capturing it in a 10-minute exposure photograph taken with the Tomline Refractor shortly after midnight on 04-05 October 1985. At this time, the comet was at a distance of 290 million km and appeared as a faint smudge. The orbit of the comet meant that it was much more favourably placed for observation from the southern hemisphere than from the northern, and thus it was that some six months later, Alan and fellow member of OASI, Roy Cheeseman, found themselves journeying through sub-zero temperatures and a blizzard *en route* from Ipswich to Gatwick to catch a flight to Australia.

Halley's Comet photographed from Katherine, 17 April 1986.

The trip was organised by *Explorers Travel Club* and Patrick Moore joined the travellers for some of the itinerary. Alan and Roy enjoyed their first glimpse of the comet with the naked eye through the window of the aircraft, at an altitude of 12 km over the UAE. Some 36 hours after take-off, the pair landed at Sydney Airport during a heatwave.

In those far-off days, long before 9/11, the process of clearing customs was generally not too onerous. Alas, for Alan and Roy the process proved more fraught than expected because of the unusual range of astronomical equipment in their luggage. Roy in particular attracted scrutiny! On escaping the clutches of the Australian Immigration Service, the pair began a fortnight of tourism and astronomy, witnessing superlative sights by day and by night. Astronomical highlights included visibility of complex changes and events in the tail of the comet, the zodiacal light, the rich star fields of the Milky Way, the Magellanic Clouds, and a partial solar eclipse on 09 April. On their return to the UK, Alan and Roy presented a lecture to members of OASI on their travels, supported by almost 200 slides! The talk was very well attended.



Alan in Cornwall, on a trip to observe the solar total eclipse on 11 August 1999.

On 11 August 1999, a solar eclipse took place for which the path of totality crossed the south-west of the UK. The last solar total eclipse visible from the British Isles took place on 29 June 1927 and the event of 1999 was therefore much anticipated, holding a special place in the heart of UK amateur astronomers. Like many of the species born around the mid-20th Century, Alan looked forward during several decades to the event, with anticipation growing as the date approached.

A few days in advance, he travelled to Lower Porthmeor, Cornwall (near St. Ives), on the path of totality. Alas, decades of anticipation count for naught in terms of British weather, and thus it was that although the sky was clear on the day before the eclipse and the day after the eclipse, conditions were unfavourable on the day itself. In fact, the sky was completely overcast by the time of first contact and, shortly thereafter, it began to rain intermittently. Alan did briefly glimpse the partial phase of eclipse before totality, and noted that the temperature dropped as the eclipse progressed and that, at the onset of totality, there was a very noticeable drop in light levels. His experience was typical of that of members of OASI who attempted to observe the eclipse from the UK.

The first two decades of the 21st Century were blessed with two transits of Venus and three of Mercury. The first of the events was a transit of Mercury on 07 May 2003; Alan did not attempt an observation. On 08 June 2004, there occurred a long-anticipated transit of Venus, the first since 1882. Alan observed from his garden, where his equipment was a showcase of his ingenuity. His telescope was a 7.5 cm refractor fixed to a home-made equatorial mount constructed from a WW I gunsight driven by a stepper motor. The telescope projected an image onto a translucent screen permanently mounted behind the eyepiece. The screen was at the end of a lightweight framework, covered in paper to keep out spurious light. He attached a large, lightweight screen to the other end of the telescope to cast a shadow backwards over the projection assembly. The arrangement produced an image of the Sun on the screen about 150 mm in diameter, which he could photograph and video record.

Having assembled and tested his equipment the night before, Alan was ready by 04.30 UT to begin observations; first contact was predicted for some 50 minutes later. But two unexpected events threatened to derail things... Firstly, with less than five minutes remaining before first contact, the electricity supply to the whole street failed. Fortunately, it was only a momentary interruption, but it caused all the electronics to reset. Alan's comments in the audio log at the time are not for the faint hearted! A few desperate minutes later, with the electronics reset, he was able to resume observations. Secondly, although Alan had worked out in advance where on the Sun's limb first contact would occur, another member of OASI (who Alan has never named!) persuaded him that he was wrong, and that first contact would be diametrically opposite on the solar disc. Alan therefore concentrated on the revised point on the solar limb and waited in vain for first contact before realising that, yes – he had been right first time... He was not alone in confusion over where first contact would appear: many observers, and the BBC, made the same mistake. Fortunately, thereafter things progressed smoothly, weather conditions remained ideal throughout the event, and Alan obtained a good set of observations.

The projection screen during the transit of Venus, 08 June 2004.

The next transit was again of Venus, on 06 June 2012. Alan was one of several would-be observers who rigged the Tomline Refractor at Orwell Park for observing the event. They constructed an elaborate sunshield (honed by experience during the transits of Venus and Mercury), and fitted brackets to enable cameras to be firmly attached to the instrument. Although the weather earlier in the year had been exceptionally dry, Anglian Water had declared that Suffolk was in the grip of an official *drought*. This had the inevitable effect of precipitating much rain in the days preceding the transit and alas, on the day itself, there was some light rain and skies remained stubbornly overcast: no observations were possible.

The fourth transit of the set was of Mercury, on 09 May 2016. Again, Alan observed from his garden. He imaged the event using a Canon 1100D DSLR camera with 400 mm focal length lens and x3 teleconverter, all mounted on the trusty WW I driven gunsight. This time, there was no drama around the time of first contact, and he obtained a lovely sequence of images of the ingress phase, showing the evolution of the *teardrop* effect. The arrival of dense clouds in mid-afternoon forced an end to observations.

On 11 November 2019, the final transit of the set occurred, again of Mercury. Alan intended to use the same equipment as for the 2016 transit; however, lack of time meant that instead of the long focal length lens and teleconverter, he relied instead on a low quality Konusmotor 90 mm refractor, stopped down with a 70 mm mylar filter, mounted on a newly acquired Skywatcher motor-driven mount. The weather was not favourable, with gusting winds and dense, fast-moving cloud. To avoid image blurring caused by telescope shake, Alan was forced to take refuge inside his house, observing through an open set of patio doors. He obtained some images, but none of particularly good quality. The weather deteriorated, and he terminated observations in early afternoon.

In the early 2010s, members of OASI began a major project to estimate the speed of light following the method of Ole Rømer (1644-1710). This required observations of eclipses of the Galilean satellites of Jupiter. Alan was one of the key contributors to the project, providing observational data and hosting presentations about the historical background to the work.

The analemma, 18 February 2014 – 18 February 2015.

In February 2014, Alan mounted a camera in his house, pointed out of a window facing due south, and programmed a PC to activate it to capture an image every day at midday for a year. A year later, a superposition of the images obtained produced a characteristic pattern, called the analemma, showing the offset of the Sun from its mean position. A search of the web with Google reveals numerous websites offering analemma calculators to predict the phenomenon based on theoretical calculations, but only a handful displaying observations. Alan's work is among the small, superlative number in the latter category.

Over the years, Orwell Park Observatory has played host to many events with an unlikely connection to astronomy. One of the strangest occurred on 31 December 1984, when Alan led a party of members of OASI and a beekeeper on a mission to evict a large colony of the insects which had taken up residence almost two years previously, inside the shutter of the dome, between the mahogany planks and the outer copper skin. To enable removal of the colony intact, some of the mahogany planks had to be removed, a task which generated much consternation, particularly among those working at height when squadrons of the insects became active, anxious to learn what was disturbing their hibernation. Eventually, the mission was successful, the colony was transferred to a crate for transportation to the beekeeper's premises, where it could over-winter safely and the bees could look forward to the prospect of a new life undisturbed by astronomers, the planks removed from the shutter were replaced, and all present breathed a heartfelt sigh of relief. In a stroke of genius, Alan titled his description of the operation in the February 1984 Newsletter, "Search For The Beehive", alluding to the star cluster Messier 44, otherwise known as the *Beehive Cluster*, one of the most prominent clusters visible during winter months with binoculars (or even by the naked eye, to the sharp-sighted).

One of Alan's skills was his ability to identify quick, informal approximations to complex problems. In the early 1990s, OASI had no independent means of estimating the track of a grazing lunar occultation, and had to rely on predictions by other organisations. However, techniques for calculating occultations other than grazes had been programmed for use by members of OASI. After a little thought, Alan devised an approach whereby by running the software repeatedly over a grid of potential observing locations, he could approximate the graze track. Although the method could undoubtedly have been made to work, it would have required more computing power than the PCs of the era could provide, so was not pursued.

In 2019, becoming impatient for access to a method for calculating the trajectory of a meteor, he devised a technique which produced reasonably accurate results very quickly, without any heavyweight mathematical manipulation.

Alan's many other contributions to OASI include installation of the noticeboards in the Belvedere at Orwell Park Observatory (1976); running a developing and printing service for films taken by members of OASI (1977); host of summer BBQs (1999-2001); and a lecture on meteors and fireballs (2019). He served as the Society's Librarian in 1978, Vice Chairman (standing in for the absent Chairman) 1978-80, Treasurer and Newsletter Coordinator in 1981, and committee member 1989-93 and 1996.

Although fit and healthy all his life, in February 2023 Alan was diagnosed with cancer. Unfortunately, the strain involved was particularly aggressive and, by the time of the diagnosis, a large tumour had developed. Alan was devastated at the news and at the monstrous injustice of the situation in which he found himself. He consented to treatment and, after a little while, the tumour began to recede. However, while out on a walk, he fell, fracturing his hip, necessitating further hospitalisation during which, unfortunately, he developed pneumonia. With his immune system severely compromised, the pneumonia proved fatal.

At the time of the initial diagnosis, Alan displayed an uncanny sense that his number had been called and that the course of subsequent events was inevitable. Sensing that the end was near, he arranged to donate his astronomical equipment to OASI, for the benefit of members of the Society, and his precious observing reports to the Committee, for safe keeping. The Committee of OASI expresses sincere thanks for Alan's gesture.

Alan's passion for astronomy, the wide range of activities that he undertook in support of OASI over the decades of his membership together with his organisational abilities and practical skills mean that he was widely known and well liked among members of the Society. His loss robs OASI of one of its most committed members. He is sadly missed by everyone who knew him.

Sincere condolences go to Alan's family.

Remembered by Chris Albins

Alan Smith and I first met in 1961, at the age of 11, when we were in the same class at Northgate Grammar School. When we were about 14 my dad took us both to an open evening at the Orwell Park Observatory which may have triggered Alan's deep interest in matters astronomical. He encouraged me to get involved, but my main interests were elsewhere.

In about 1965 Alan was not impressed when we trialled my model boat on a ballast pit, supposedly controlled by a one valve transmitter and a two transistor receiver, backed up with a length of string.

I remember Alan's first motorised mode of transport was a smart, red BSA Bantam motorcycle. He was always interested in vehicle maintenance and enthusiastically assisted at Ipswich Transport Museum.

Alan was always a leader, being the Technical Officer in charge of a team of engineers responsible for maintenance of Ipswich Telephone Exchange. When the electro-mechanical equipment was replaced with digital processors, he again was in the forefront, leading the small team maintaining Ipswich Orwell System X trunk exchange. Eventually, he moved to work at Martlesham, testing the software that was used on the new exchanges.

In the early 1970's Alan was operating a meteor camera sited on top of his garden shed. This consisted of a Zenith camera and a rotating shutter. He had arranged for an electric motor to automatically operate the camera and take exposures. Being interested in photography, he developed and printed his own 35 mm negatives.

Another subject of common interest to us both was that of solar energy. In the 1970s we were preheating our hot water tanks with home-constructed solar panels consisting of central heating radiators, painted black, and controlled by simple electronics.

All of Alan's projects were undertaken with the deepest of understanding and commitment to detail.

I shall greatly miss collaborating with Alan on our various projects.

Remembered by Hans Betlam, on Behalf of the Dutch Meteor Society (DMS)

Translated from the Dutch original using Google Translate.

On 09 July, we received the sad news that Alan Smith of Ipswich, operator of all-sky station EN911, passed away.

He had been ill for some time. He turned 73 years old and thought that he was still far too young to say goodbye.

Alan started serious all-sky work in 2021. He wanted to do accurate positional work rather than pursue automated video sensing techniques. The way in which we run the all-sky network at DMS really appealed to him. Starting in 2021, he produced a steady stream of beautiful images of fireballs. He managed to provide many images which overlapped with those taken in the triangle formed with Oostkapelle and Benningbroek (both in the Netherlands). He worked meticulously and always provided his results very quickly.

In addition to all-sky work, Alan was also one of the driving forces within the Orwell Astronomical Society (Ipswich).

Characteristic of Alan's enthusiasm was his reaction to the fall of the Dortmund meteorite. Even before searches were planned, he was already in the starting blocks and had researched schedules for ferries to enable him to travel to participate in the search.

We never got to meet Alan in person, but he was comfortably at home in the all-sky club. As his brother put it when he notified us of Alan's passing, *I don't know where you all hang out, but Alan was part of your club and would like me to put you in the picture.*

We wish his family all strength at this difficult time.

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