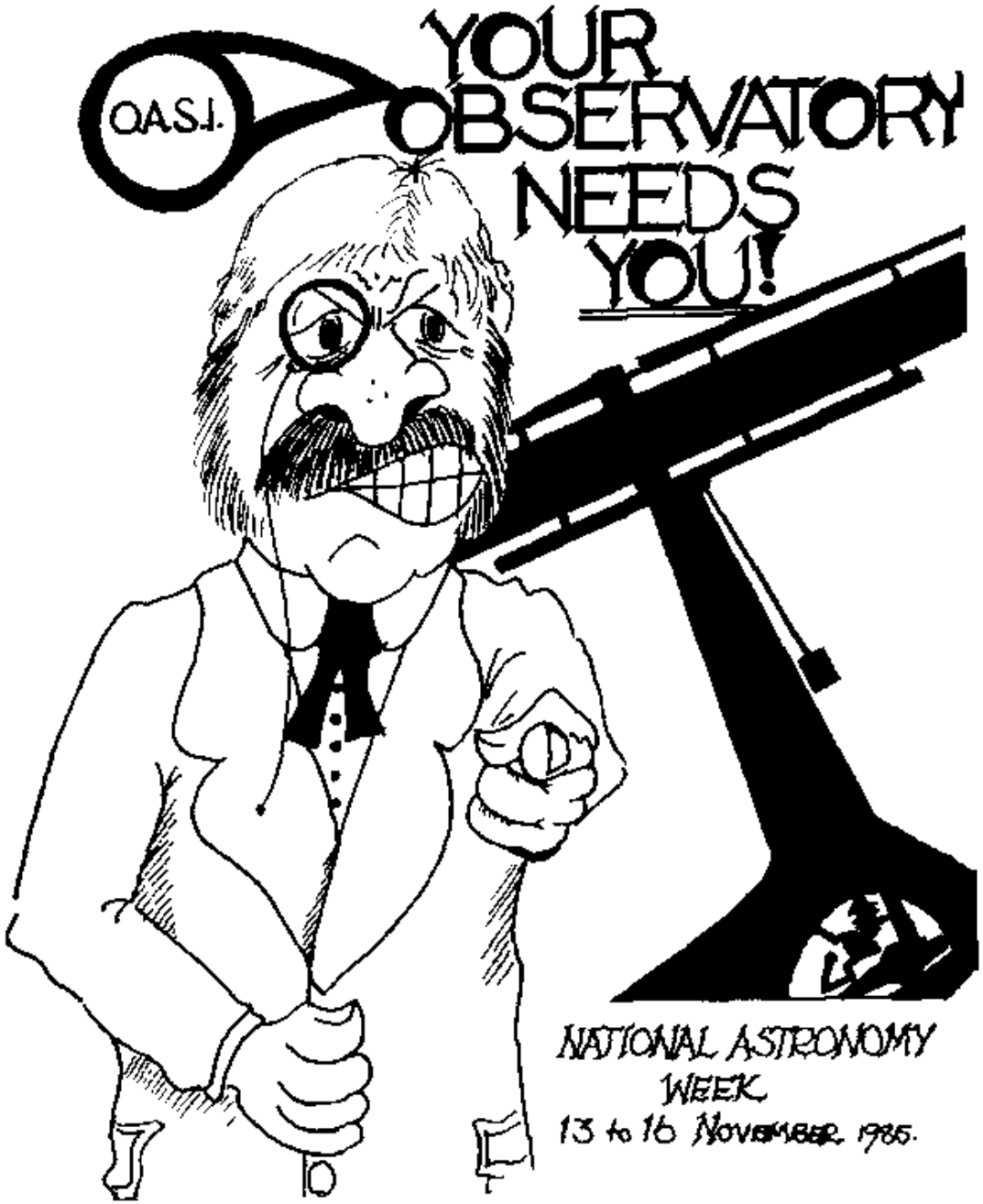
NOVEMBER 1985



SOCIETY NEWS

1. OPEN WEEK

   As many people as possible will be required to help man the observatory on November 13, 14, 15, 16. If you can help please contact any committee member.

2. Greenwich Trip

   A limited number of places are available for this trip to Greenwich on Friday December 6th to use the 28" refractor. Interested members please contact R. Gooding.

3. Lecture Meeting

   Remember the lecture at the Friends' Meeting House, Fonnereau Road. on November 1st at 8.00 p.m.

NIGHT SKY

Constellations (all times G.M.T.)

The winter constellations of Taurus, Auriga and Gemini are all visible in the early evening by the middle of the month.

Sun Rises approx. 07.00 to 07.55
Sets approx. 16.30 to 15.55

Moon 5th 12th 19th 27th

Occultations

1st	ZC	849	mag. 6.5	R	22hr.10.0m
20th		3428	5.2	D	23hr.28.5m
30th		1088	5.6	R	20hr.23.3m

Mercury Greatest eastern elongation on 8th (23°)
Inferior conjunction on 28th

Venus Visible in morning sky. Rises at about 06.00 in mid month mag. -3.4

Mars Rises at about 03.30 in mid month mag. 1.9.

Jupiter Visible in the west in early evening. Sets at about 2130 in mid month mag. 1.9

Saturn Conjunction with the sun on the 23rd.

Uranus Lost in evening twilight. Sets at about 17.00 in mid month mag. 5.8

Neptune Sets about two hours after sunset mag. 7.7

R. Gooding.

F.A.S. CONVENTION

October 5th was the date of this year's annual F.A.S. Convention at Herstmonceux. This yearly event seems to come round as frequently as Monday mornings. The meeting place this year was at mine. Eric arrived at 7.00 a.m. with our means of transport, to be followed shortly by Martin & Judith. A short journey across town then ensued to pick up Alan. Both Martin and Alan were showing signs of not being able to last out the day, they had been up most of the previous night vainly attempting to locate Halley's Comet. By 7.25 our group was heading south for darkest Sussex.

As the Dartford Tunnel approached ever near visions of our last abortive attempt to traverse the Thames via this route were never far away. The M25 was jam free, well on this section at least! About ½ mile from the tunnel is a tower with seemingly little practical use except to be the harbinger of potential death, destruction and jams. On the top of the tower are two numbers that flash on and off, giving the time and temperature. The number of motorists who divert their gaze over to these flashing light bulbs is unknown, at least 4 pairs of eyes did from Eric's car.

The tunnel was negotiated with ease but ahead lay the formidable barrier of the Toll gates, an empty booth was found. Eric proceeded to look round hopeful of finding a willing hand emerging from out of a kiosk that would accept our voucher. No hand appeared, not even a body that owned it was in residence in the kiosk. The toll booth that we inadvertently entered was an automatic one, accepting money only. The button summoning assistance was pushed, nothing happened, except the reversal of the car behind. We rapidly followed, with anguished glances towards the fast approaching traffic to our rear. Finding a manned kiosk we were once again on our way.

We had arranged to meet Roy at 8.30, and found him waiting for us with 10 seconds to go, at the tunnel car park. The journey proceeded with Roy taking the lead. Everything went smoothly until we neared Herstmonceux. In previous years we had entered the R.G.O. grounds by the east gate; this was changed to the west gate this year. As Roy approached the lane for the eastern entrance his left indicator sprung to life. With flashing headlights and a cheer we bid Roy farewell, as he disappeared gracefully round the corner. Our group made its way to the west gate, arriving at 10.00 a.m.

Car parking was in the usual place in front of the castle.

No one present had arrived here via the west gate. On seeing cars parked on the grass in the expected place, it seemed a reasonable idea to turn off the road to join them. However, with only feet to go, we narrowly missed giving any potential spectators the most dramatic entrance of the day. The ground in front suddenly plummeted downwards for 5 feet. A quick touch of the wheel put the car back on the road leaving in doubt the question as to whether Eric's car could ever gain. it air worthiness certificate.

It was ten minutes before Roy reappeared having failed to locate the eastern passage. The wait was not without incident. The car park extended over an acre, but this did not deter a determined person from parking only 3 feet away. This spot was deemed a most desirable residence to put out to grass a retired Bunby yellow telecom van. Its air conditioning was assumed to be broken as all 4 doors were seen flapping in the wind, one of which crashed into Eric's.

Once our party was complete again, we walked over to the reception desk in the castle. We had decided to attend the lecture starting at 11.00, but in the meantime went for some coffee in the cafe, and a look round the trade stands. The lecture was given by Dr. Paul Murdin, on the European Observatory on La Palma. Only a limited number of seats were available for the talk, which left nearly as many people standing as sitting. The number of people in the room caused the temperature to rise to a considerable degree. This unfortunately became a major distraction from the lecture.

Our thoughts now centred on lunch. The cafe was closed at this time so hot drinks were unavailable. After all, cafe staff are entitled to have a lunch break, so why shouldn't they be closed at lunch time! We retreated back to the cars for a packed lunch.

After lunch we split up into several groups to walk either round the grounds, to receive refreshment from the bar in the castle, or to look round the trade stands again. Everyone joined up again for the 14.00 lecture by Michael Maunder on Astrophotography.

When the lecture finished every one went outside to enjoy the fine sunny weather and a visit to the laser ranging and 26" refractor telescopes.

Roy and his party of two, namely David Perkins and Michael Frost went to the 3rd lecture by David Hardy, who talked about Artists in Space. We were thus unable to bid Roy farewell as it was decided to leave for home at 18.00. The journey home went well until a round-about was encountered, at which an incorrect turn was taken. For anyone who has been kept awake at night with the nagging doubt as to whether or not a Ford

Sierra car can be turned in its own length, I will now put their mind at rest. With people cowering in the back Eric executed a U turn back to the round-about. The next stop was at a Fish & Chip shop in Orpington.

Having passed back through the tunnel, a macarbre sight was noticed. Do ambulances in Essex tout for business, because parked in the middle of a fly-over was a stationary ambulance. In fact it was quite close to the temperature and time tower. Home was reached by 21.30.

Members present on the trip were Martin Cook, Judith Herring, Alan Smith, Eric Sims and Roy Cheeseman.

R. Gooding

Visits in November

Wednesday November 6th
Visit by colleagues of Mr P Stonebridge @ 7.45pm.
Wednesday November 13th to Saturday 16th
Dome open to the public from 8pm (National Astronomy Week)
Monday November 18th
Visit by Felixstowe Amateur Radio Society @ 7.30pm.
Tuesday November 17th
Visit by Inter Varsity Club @ 8pm.
Wednesday November 18th
Visit by Gifted Children @ 7.45pm.
Friday November 22nd.
Visit by Capel Countryside Club @ 8pm.
Saturday November 23rd
Visit by Rayleigh Astronomical Society.

(David Barnard-Public Relations)

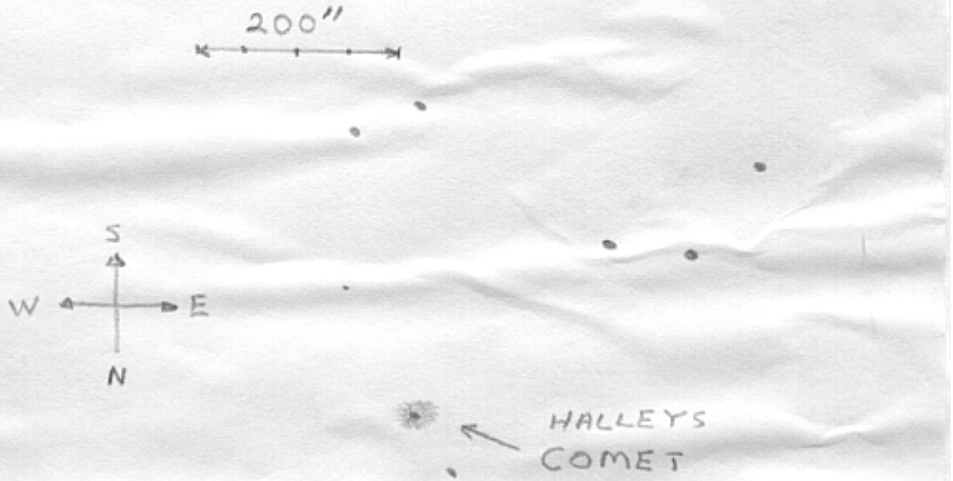
Sighted at last! Halley's Comet — D B Payne

On Saturday 12th August we had one of the finest nights for some considerable time and it was the first real opportunity scince the middle of August for a thorough search for that elusive wanderer Halley's Comet. I had been away for the previous ten days and hadn't had any contact with other members of the Society, I therefore decided to search with my 10" reflector rather than travel to the Orwell Park Observatory. However I subsequently discovered on the following Wednesday that several members had taken the opportunity of the clear Saturday night to use the Orwell 10" refractor for a search for the Comet.

Although the Comet would have risen about 10:00pm (BST), the eastern horizon is obscured by houses and it was about 12 oclock before the region of sky containing Halley was visible from my observatory. At 00:05hrs (Sunday morning) I opened up the observatory and, using binoculars, began to familiarise myself with the area of sky containing the Comet. Having found the correct area of sky with binoculars (there was no sign of the comet) I started to use the telescope. I first used my lowest power and widest field eyepiece a 32mm Erfle. This gives a magnification of about 50x with almost a 1 degree field. I first identified the two stars 68 & 71 Orionis and then using the Sky and Telescope star chart as reproduced in last months Journal I slowly 'star hopped' towards the predicted position of the Comet. When I had the correct region of sky centred in the field I began searching for the comet. Although I could identify all the stars in the field on the star chart, there was no sign of the comet' I decided to increase magnification to darken the sky glow. Just before I changed eyepieces I glimpsed a very faint fuzzy patch but it was so elusive that I couldn't properly position it against the back ground stars. I Then switched to a 20mm Erfle giving approximately 80x magnification. This darkened the sky significantly and at 1:15am on Sunday 13th October I had my first positive view of Halley's Comet.

It appeared as a very faint misty patch in the centre of which could be glimpsed (with adverted vision) a small almost stellar point. It was most reminiscent of the nucleus of a faint spiral galaxy. I increased the magnification to 200 times using a 9mm Kellner eyepiece and then went to 280x with a 6mm orthoscopic eyepiece. With this magnification the stellar like nuclear region was clearly visible, the surrounding faint glow appeared circular 30-40 seconds of arc across. I decided at this time to go in and have a cup of coffee and then come out and draw the field. I left the telescope tracking the comet and came out again at about 2:00am. After about 15 minutes of dark adaption I drew the field as shown in the drawing below. However in the half hour or so that I had left the telescope a slight mist had come up and I had lost about half a magnitude of sensitivity. There were several other fainter stars not shown on the drawing or

on the star chart, that were clearly visible when I first sighted the Comet. By thetime I had finished recording the field the comet was becoming difficult to see (although I could still see all the stars shown on the Sky and Telescope chart. The Comet was in fact considerably fainter that I expected it to be and would estimate its magnitude as being around 12.5. The faintness was independently confirmed by the observers using the Orwell Refractor. They did not have a unanimously agreed visual sighting but did get a photograph of the region with a 15 minute exsposure on HP5 film uprated to 3200 ASA. This negative has a faintly recorded object in precisely the same position as shown in the drawing (see accompanying article).



PHOTOGRAPHIC RECOVERY OF HALLEY.

During early August it was decided that an attempt should be made to photograph Comet Halley, using the Orwell Park 10inch refractor. Unfortunatly it was not until the night of 4/5 Oct. that weather conditions permitted a sensible try at the much heralded object. Following a few phone calls, three members assembled in the observatory at midnight. Despite a nearly full moon close to the predicted field, photographic exposures were started at 0200hrs UT. by two of the members using Ilford HP5 B/W and 1000 ASA colour film.

After development, the 10 min exposures on both films showed an object in the predicted position. A 10X8 inch print of HP5 film (rated at 3200 ASA) showed a remarkable lack of background fog and a definate image of the comet.

The following weekend using much clearer skies and no interfering moonlight another attempt was made. Again using HP5 rated at 3200 ASA, a photograph taken with the 10 inch, guiding on stars in the predicted field (no glimpse of the comet to the eye) produced star images down to mag 12.5, and an object exactly in the predicted position. Subsequently, a comparision with a drawing made by Dave Payne at the same time using his own telescope showed an object in the same place.

Were these photographs the first of Comet Halley through the 10 inch, or did someone else take some 76 years ago at the last return? If anyone knows of photographic observations using the 10 inch Orwell Park telescope I would be very glad to hear from them.

A.J.Smith.

Halley's Comet

M. Barriskill

After an unsuccessful first attempt to observe this most famous of all comets on the 27th August, when it was probably too faint for my 8.5" reflector, (the B.A.A. prediction being 12.8), I have now made two successful visual observations, on the 12th and 14th of October.

On the 12th I used binoculars to locate the general area and then a wide field eyepiece in the reflector to find the exact position. At first there was no comet to be seen but after nearly 30mins. of searching I started to suspect a very faint object in the predicted position. It could only be glimpsed with averted vision at first but with the sky transparency improving I became increasingly certain it was Halley's Comet.

I estimated the brightness at mag. 11.5, a full magnitude fainter than most predictions, and the size at approximately 2'arc. It was generally diffuse but the nucleus was visible with high magnification. The naked eye limit by this time was mag. 6

The observation on the 14th was much the same as the previous one, with a delay before the comet became visible due to low altitude, but by 00-20U.T. it was directly seen.Both the size and brightness were the same as on the 12th.

Hopefully these will be only the first such observations of this long awaited and much heralded comet.

Predictions for Comet Halley

	R.A.	Dec.	Mag.
Nov. 1st	5h 22.3m	+21 48'	8.8
5th	5h 05.0m	+22 04'	8.4
10th	4h 36.2m	+22 14'	7.9
15th	3h 57.8m	+21 56'	7.4
20th	3h 08.9m	+20 43'	7.0
25th	2h 12.6m	+18 10'	6.6
30th	1h 16.1m	+14 28'	6.8

Predictions for Comet Hartley-Good

	R.A.	Dec.	Mag.
Nov. 1st	19h 05.8m	+ 3 45'	7.3
6th	18h 47.4m	+ 6 53'	
11th	18h 31.8m	+ 9 28'	7.1
16th	18h 17.8m	+11 35'	
21th	18h 04.6m	+13.16'	6.8
26th	17h 51.9m	+14 30'	

Predictions for Comet Thiele

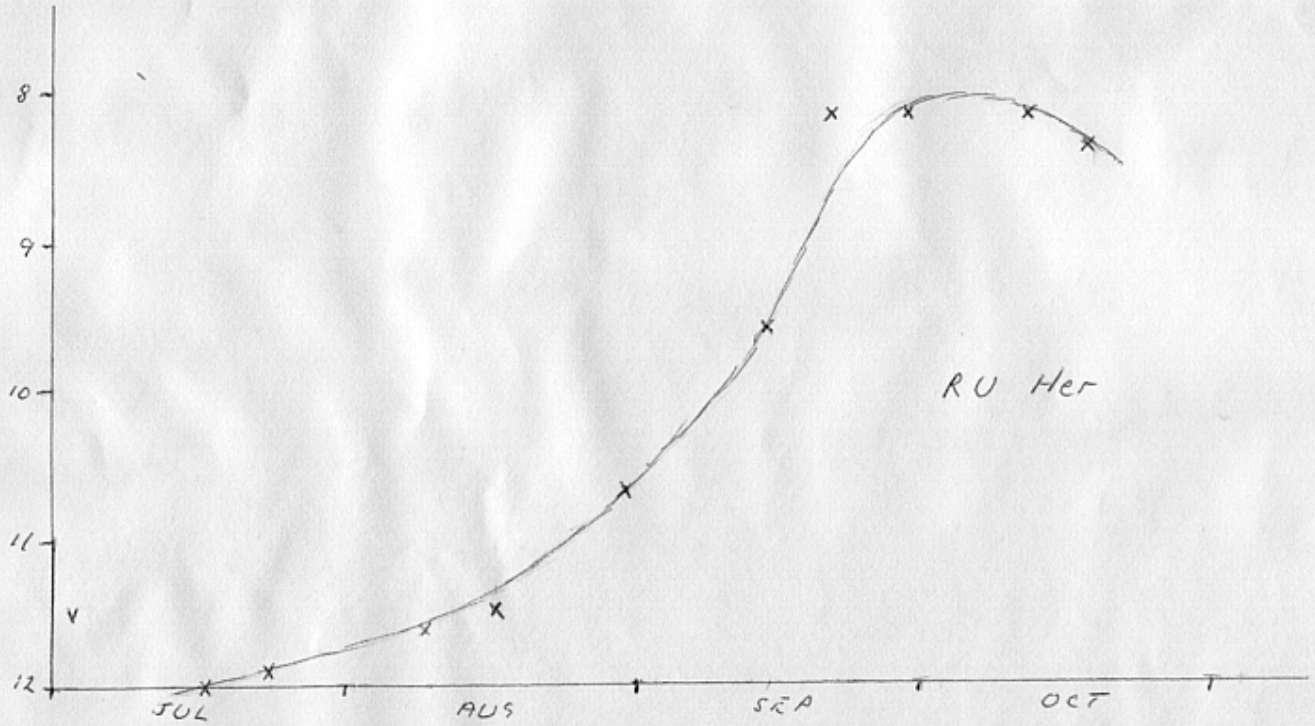
	R.A.	Dec.	Mag.
Nov. 1th	2h 50.4m	+40 24'	8.9
5th	1h 31.8m	+41 11'	8.8
11th	23h 43.9m	+36 19'	8.8
15th	22h 54.1m	+31 23'	9.0
21th	22h 07.0m	+24 44'	9.3
29th	21h 33.2m	+18 35'	9.7

(M Cook)

VARIABLE STAR OBSERVATIONS by Mike Nicholls

This months light curve shows RU Herculis from July to October this year. This star is a member of the class of long period variables with a period of 485 days ± a few days. The curve here shows it rising up to a maximum and starting to fade again.

All the observations were made using an 8" reflector.



PROGRAMME FOR NOVEMBER

MONDAYS from 8pm — DOUBLE STAR & PLANETS SECTION
4, 11, 18, 25, — Mr N Taylor, [redacted] Farmlands, Trimley
Mr T Gillan, [redacted] Felixstowe — Tel:Fel. [redacted] Tel:Fel.

WEDNESDAYS from 8pm — NEBULEA & FAINT OBJECTS SECTION
6, 13, 20, 27 — Mr M Cook, [redacted] Ipswich — Tel: Ips. [redacted]
Mr D Payne, [redacted] Wickham Market. — Tel:W.Mkt [redacted]

FRIDAYS from 8pm — GENERAL OBSERVATION SECTION
1, 15, 29 — Mr R A Lobbett, [redacted] Felixstowe. — Tel:Fel. [redacted]
Mr J Hood, [redacted] Ipswich. — Tel:Ips. [redacted]

1985 COMMITTEE

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