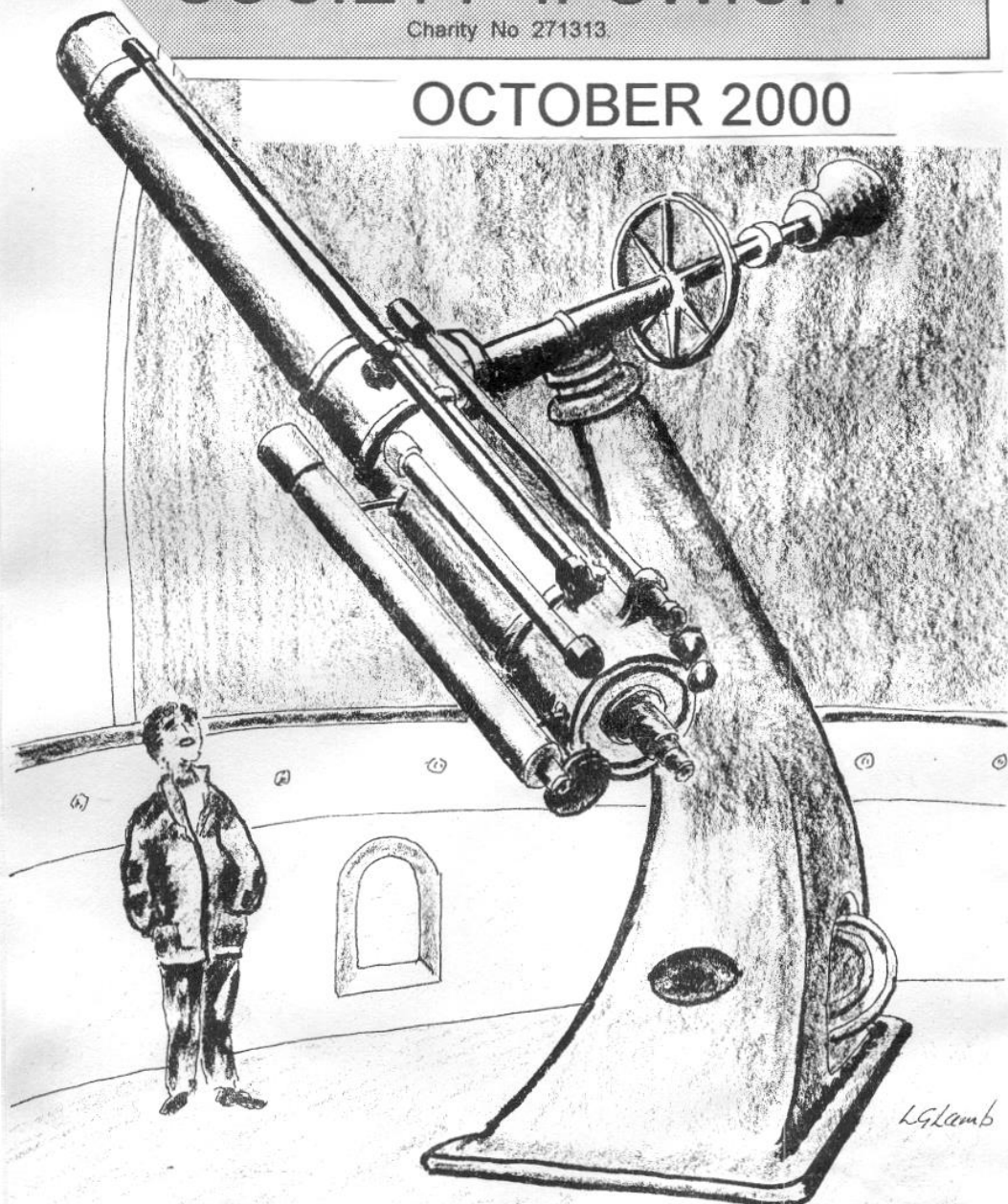


ORWELL ASTRONOMICAL SOCIETY IPSWICH

Charity No 271313

OCTOBER 2000



ORWELL SCHOOL OBSERVATORY ~ 10" DIAMETER REFRACTOR

Society News

1 Next Committee Meeting

The next committee meeting will be held on Saturday 11th November from 19:30 in the clubroom. This is an open meeting and any one who is interested is invited to attend.

2 Events for 2000

Event	Details	Date
Visit to Norwich AS observatory	Has been arranged for October	Friday 20 th or 27 th
Open Weekend	Saturday 7 th October from 19:00 to 22:00 Sunday 8 th October from 17:00 to 22:00	
Lecture Meeting	Mars and the Amateur Astronomer, Richard McKim, Director of the BAA Mars Section.	Friday 24 th November
Christmas Meal	Wilford bridge Melton	December 13 th from 20:00
Allan Chapman Talk	Orwell Park School	18th May 2001

Visit to Norwich Astronomical Society's Observatory at Seething

Directions to the Observatory

- 1 Leaving Ipswich along the A140
- 2 Turn left on the B1135 for Bungay
- 3 Turn right at Woodton to the B1332
- 4 Turn 1st right
- 5 Turn 1st right again. This lane should be Harveys Lane. It is sign posted to SEETHING OBSERVATORY, SEETHING INDUSTRIAL ESTATE.
- 6 Continue down this twisty and rather narrow road for just over 1 mile. You come to a cross roads. Go straight over, into Toad Lane.

You will pass the old USAF Airfield control tower on the left. The observatory is about 200 yards further on the left.



The visit will be on either the 20th or 27th October, and will depend on the weather

Open Weekend



As much help as possible will be required for this year's event to run smoothly. If you are able to help please contact any committee member, so that your name can be added to the rota.

Dates:- Saturday 7th October from 19:00 to 22:00
Sunday 8th October from 17:00 to 22:00

Christmas Meal

It was decided at the last committee meeting to opt for the Wilford Bridge pub again. The date is Wednesday 13th December from 20:00. There are only a limited number of places available. The cost will be £15.95. A £5 deposit is required by mid November . Please contact Roy Gooding

Night Sky

All times GMT

Sun

The sun will be rising approximately between 06:10 to 06:50
The sun will be setting approximately between 17:40 to 16:40

Moon

1 st Quarter	Full Moon	3 rd Quarter	New Moon
5 th	13 th	20 th	27 th

Mercury Mercury is at greatest eastern elongation on the 6th (26 °). The planet will not be observable as it is too close o the sun . Mercury will be at superior conjunction in the 30th.

Venus Venus starts to move out of the evening twilight sky by the end of the month. Magnitude -4.

Mars Mars will be rising at about 03:00 in mid month. Magnitude 1.8.

Jupiter Jupiter will be rising at about 18:00 by the end of the month.
Magnitude -2.7

Saturn Saturn will be rising at about 18:30 by the end of the month.
Magnitude -0.2

Uranus Uranus will be setting at about 23:00 by the end of the month.
Magnitude 5.7

Neptune Neptune will be setting at about 22:00 by the 31st. Magnitude 7.8

Meteor Showers

Shower	Maximum	Limits	ZHR
Piscids	October 13 th	September to October	?
Orionids	October 20 th	October 16 th - 27 th	25

Meteor source is the BAA Handbook

Roy Gooding

OCCULTATIONS DURING OCTOBER 2000

The table lists stellar occultations which occur during the month under favourable circumstances. The data relates to Orwell Park Observatory, but will be similar at nearby locations.

D or R	Date & Time (UT)	Lunar Phase	Sun Alt (°)	Star Alt (°)	Min Dist (rad)	Star	Mag
R	03 Oct 17:57	0.34+	-6	14	0.65N	ZC 2509	5.8
D	08 Oct 23:42	0.81+	-44	10	0.55S	ZC 3197	6.4

James Appleton

2000 COMMITTEE

CHAIRMAN
 SECRETARY &
 WORK PARTY ORGANISER
 TREASURER & PUBLICITY
 MECHANICS
 NEWSLETTER CO-ORDINATOR
 BEGINNERS MEETING CO-ORD
 & VISIT CO-ORD
 EQUIPMENT CURATOR
 LIBRARIAN

D Payne
 R Gooding
 M Cook
 E Sims
 T Sampson
 G Coleman
 J Walsh
 J Appleton

Home Phone Work Phone

CO-OPTED MEMBER
 LECTURE CO-ORDINATOR
 & DARK SKIES

P Richards

JOURNAL ARTICLES TO
 CORRESPONDENCE ADDRESS

E Sims [redacted] Ipswich Suffolk IP1 4HA
 R Gooding OASI Secretary

MEMBERSHIP

[redacted] Ipswich Suffolk IP1 6AE
 M. Cook [redacted] Ipswich IP4 5PZ

The Dunkirk Spirit

On foot, by bike, and via detours around slow moving convoys, 10 determined members gathered for the first Astronomy Workshop of the new [third] series on Wed Sept 13th.

It was a lively interactive session, with the topic 'Talking about Telescopes' keeping members' attention well after the official finishing time. A Meade ETX, and a LX10 were on show.

Starting with a note of caution to potential purchasers, it was noted that the classified ads for 'used' telescopes in the astronomy press contain descriptions such as 'nearly new', and 'hardly used'. Five reasons for not buying a telescope were therefore considered against five for owning one.

A quick historical tour of telescope development was then taken to bring out the great names associated with today's instruments: from Galileo to Guillaume Cassigrain, not forgetting Hans Lippershey, and Leonard Digges [who?].

A few minutes was then spent in discussing each of many different aspects of telescope design and function, from portability to aberrations. We realised that with limited time on such a wide subject, we could only scratch the surface - [to use a most inappropriate phrase]. Maybe more time could be spent on any one of them up in the club room on cloudy Wednesday nights - once the decorating has been completed of course.

So the odds against travelling were overcome, and the Dunkirk spirit prevailed. But as Pete remarked 'What a pity you can't put it in your tank'.

Ted Sampson.

Next Astronomy Workshop

This will be held on Wednesday October 11th at 7.45 until 9 pm in the science classroom. The subject is 'Constellation Close-up Lyra'. Please bring a sample of your favourite way of navigating the sky, be it planisphere, star chart, or star atlas such as Norton. Also some details of the content of Lyra such as in the Collins Gem - 'The Night Sky' would be useful. Hopefully by Wednesday people will have recovered from the Open Weekend.

Ted Sampson.

In this the 'millennial year', Orwell Astronomical Society proudly presents..

ORWELL ASTRONOMY 2000



*Plans are almost complete. Most of the background work is done.
Its time to fill you in with details of the event.....*

We have based the show around the annual open weekend format but, unlike last year, the exhibition area will be separate from the clubroom area, leaving the balconies free for the public to obtain views through our smaller instruments (weather permitting). The equatorial room, as always, is the prime focus of public observing – principally on the planets Jupiter and Saturn, with a slide show or view of the Pin Mill Pub sign if the weather is unkind to us.

The Headmaster has given his kind permission for us to utilise the Geography Classroom for our exhibition area. That's the classroom on the corner as you walk round to the observatory from our parking area. It affords easy access and egress from the tower and, we expect, a toilet will be available for MEMBERS ONLY nearby. *That'll save the usual tying of reef knots or River Dances during the event..*

The society, following a stringent security examination, has been granted the loan of lunar rock and meteorite samples by the PPARC. This will be the main display in the classroom and Garry & Jacki Coleman have kindly agreed to man the stand, along with their son Andrew, a trained geologist. Barry Ellam will set up a microscope for people to view the slide samples also being provided by PPARC.

Also on show will be our new society display stand – aimed at telling the public why they would be fools not to join on the spot!! Mike Whybray and Pete Richards will set up a computer display based on the Soho images. Paul Whiting is bringing along his excellent Radio Astronomy display, featuring the Shoemaker-Levy Comet impacts on Jupiter and a Star Wars light sabre type thingy, to demonstrate how Aurora and Nebulosity occur. (the kids – younger and older – will love it!) James Appleton and Monica Lustig have organised displays of Auroras and Saturn respectively. Monica has also burnt much midnight oil designing a competition questionnaire for visitors to fill in and return (a Philips Astro Pack and a special private evening in the dome being the prize). Roy Gooding is also donating an exhibit. Clacton & District AS are bringing along their 15" Dobo and a display of drawings & photos by their members. Les Lamb

will bring along his excellent 8" Dobo – to show how it *SHOULD* be done (telescope making) and has produced some of his super astro cartoons in larger sized framed versions for show (yes, there is a lighter side to our science) and Ted Sampson hopes to bring along his Meade to set up in the quadrangle outside the classroom (This is where the main show entrance and reception will be) to cater for those who cannot make the climb upstairs.

We will be providing name badges for all our volunteers (PLEASE FILL IN YOUR NAME AND WEAR THEM..) and, if you are helping out, please bring along any refreshments you may feel necessary – there is a toilet after all!

We expect to begin setting up the classroom around 3PM on the Saturday. Would volunteers not engaged in setting up displays or the telescopes kindly arrive about half an hour(ish) before the public opening time and speak to me in the classroom for 'deployment' and to obtain badges.

THE SHOW OPENS TO THE PUBLIC AT 7PM ON SATURDAY 7TH AND 5PM ON SUNDAY 8TH.

We have agreed that the classroom WILL be cleaned and returned ready for use directly after the show closes on Sunday evening – effectively after 9.30(ish) when remaining visitors should be viewing the heavens upstairs.

Although we have volunteers already – MORE ARE WANTED. Please contact either myself or Pete Richards.

If anyone has any queries, I'll be happy to answer them, either on the phone () or via email

**THIS IS A VERY SPECIAL SOCIETY EVENT,
PLEASE GIVE US YOUR FULL SUPPORT.
WITH A BIT OF LUCK AND A FAIR WIND...**

It'll be a pleasure for all of us to attend and a sight to see!!!!!!

Ken Goward

*European Astrofest – Leeds Astromeeet – Orwell Astronomy 2000 –
FAS Convention – BAA Exhibition - You name it*

IT'S ALL OLD HAT REALLY..

The trend towards 'crowd pulling' astronomy exhibitions, whilst welcome and almost always enjoyable, is certainly not a modern innovation.*

Anything but!

As we gear up for our show this month (7th & 8th as if you need reminding) by a great coincidence, it'll be almost 75 years to the day since another major astronomical show was staged in our area..

The event was organised by one Herbert Gerard Tomkins *CIE FRAS FRPS* in the grounds of his retirement home: East House, East Lane, Dedham** to 'christen' his newly installed 24" Cassegrain Reflector.

The late Rowland Clarkson (the Trimley based amateur astronomer who, for a while, had a lunar crater named after him and who has been featured in this organ by Pete Richards) wrote of the show;

“On October 3rd 1925 one of the biggest astronomical-social events ever held in East Anglia took place at East House, Dedham, when the 24-inch was officially opened, tea was served in a large marquee, and some hundreds of invited guests spent the afternoon viewing the various exhibits. There were 23 of these, which included models of the planets, models of lunar craters, drawings of planets, large numbers of photos, a scale model of the solar system stretching across the paddock, a demonstration of sun-spots in a dark room, projected through my 3 ½ inch Wray onto a screen the other side, giving a six-foot diameter image of the sun and magnificent pictures of the spots, mottling of the sun, faculae etc., and in another dark room Miss Vera Reynolds gave a similar demonstration of the solar spectrum using a 3-inch of Tomkins'.”

Of Miss Reynolds, so far, no further details have come to light. Of Tomkins, however, one has been able to uncover an outline of his 'astro CV'. He seems to have originated from the Streattham area of London and

was elected to the BAA in its earliest days, 1899 (the BAA dates back to 1890). He was also elected FRAS, but I have no date information. The greater part of Tomkins' life was spent in India, where he was a Civil Servant and eventually rose to become the head of the Financial Department, retiring in 1922 to North Essex. He, like Clarkson, was a lunar observer (for many years they co-operated with each other in lunar observations) and made several reports back to England, including a particularly interesting lunar eclipse in 1920, which he observed from the roof of his home at Barrackpore, with several 'ex-pats' using a variety of small instruments. He also submitted several papers to both the RAS and BAA.

Tomkins was obviously well heeled and built two observatories at his Dedham home (neither of which seem to have survived). One housed an 8½ inch equatorially mounted, clock driven Newtonian and the other, the previously mentioned 24 inch Cassegrain. Originally intended for use in a Newtonian configuration, the mirror for that instrument was started off in 1911, but illness, WW1 and other delays prevented Tomkins finishing it until 1925. It had a 12ft 7 ¼ inch focal length, the flat and 6½ inch convex mirror was by Messrs. Cooke of York. A camera was mounted at the lower part of the tube.

Tomkins died in 1933 and his 8½ inch was eventually presented to the BAA, and is still listed in their collection (Catalogue No 46). The 24 inch was sold to an unnamed observatory in Japan – and there the trail goes cold.

* *Well, let's hope our show IS a crowd puller..*

** *The house stands to this day and might be described in estate agents terms as 'an extensive country home set in impressive grounds.'*

As mentioned at the start of this narrative, nothing is new and, who knows, in 75 years time somebody may recall Orwell Astronomy 2000 to our descendants..

Ken Goward

Sources;

Correspondence to EADT from R L Clarkson

Journal of the British Astronomical Association (Vols 37,38,60)

Monthly Notices of the Royal Astronomical Society (Dec 1929, June 1930)

It's official! The Sun has reached 'Solar Max': the peak of its 11-year cycle of activity. The solar activity encompasses several energy-related phenomena of which the most readily observable - by amateurs - is the number of sunspots. Ironically, at about the time it was concluded that solar max had been reached the Sun's disc appeared devoid of spots. Sunspots come and go, however, so even at solar maximum there may be a period of time when virtually none are visible. Then around the limb of the Sun came the largest sunspot group seen since 1991 shortly after the last peak of solar activity. As the Sun rotated it carried the Sunspot group - designated AR9169 - to the middle of the Sun's disc around the third/forth week of September. The spot was easily seen by projection and a number of members observed it and photographed it. AR stands for Active Region, by the way.

This Sunspot group covers an area of the Sun about 13 times larger than the surface area of the Earth. Sunspot and Sunspot group size is conventionally measure in terms of millionths of the surface area of one hemisphere of the Sun. At its largest AR9169 covered 2140 millionths of a solar hemisphere. The largest ever recorded was seen in 1947 and measured over 6132 millionths.

The differential rate of rotation of the Sun means that material at its equator rotates in about 25 days and at the poles in more than 35 days. The differential rotation contorts the Sun's magnetic field so that it twists and breaks causing the Sunspots and other phenomena. The Sunspot group will be disappearing around the limb of the Sun in early October. It'll be interesting to see whether any new spots develop.

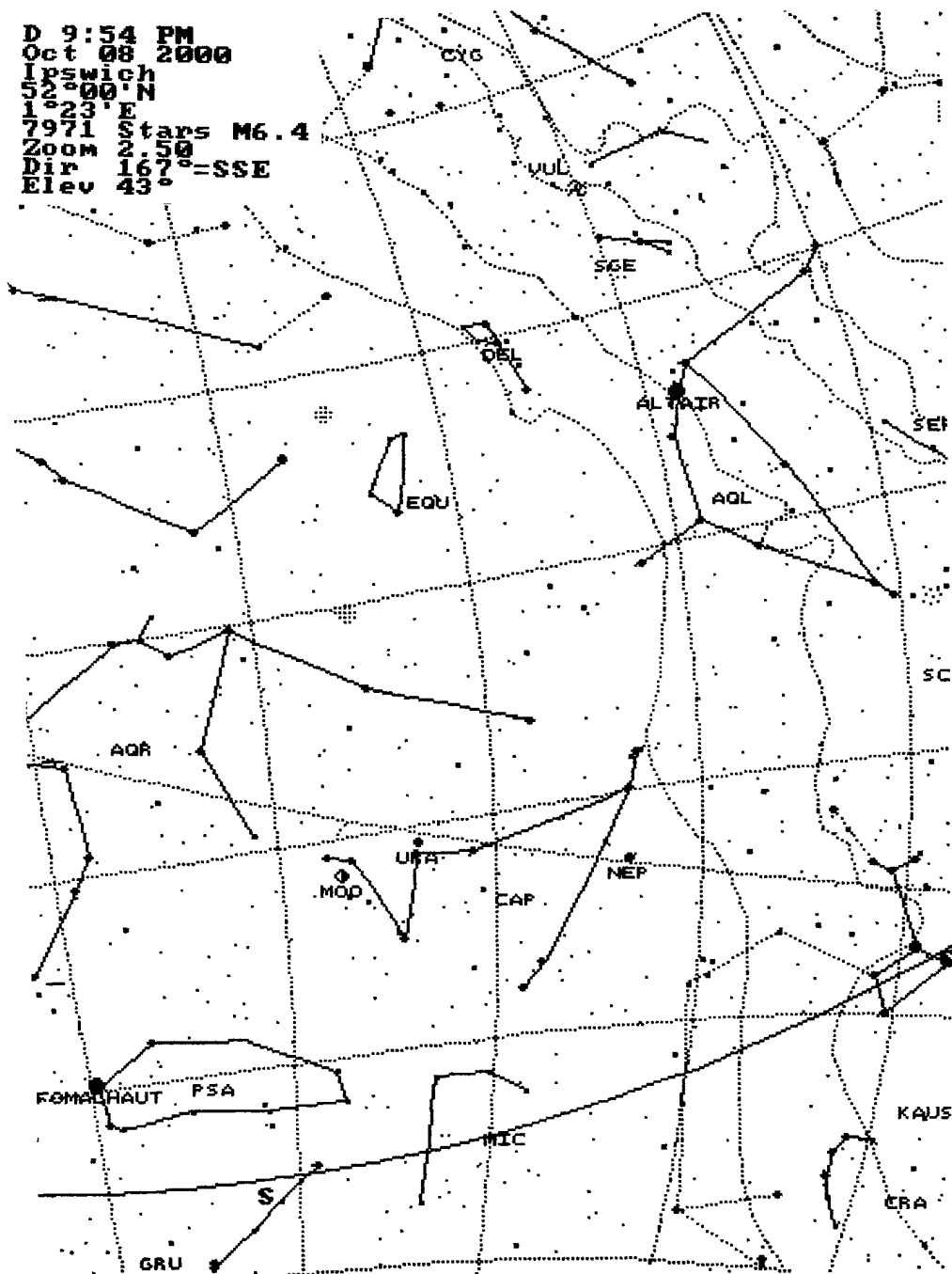
Solar activity as well as being of interest for solar observers is of interest to everyone on the Earth because the cycles of solar activity are known to effect the Earth's weather (can we blame it for all the rain we've had recently?) and because there is an increased chance of a geomagnetic storm at solar max. A geomagnetic storm occurs when the Earth's magnetic field is enhanced by the arrival of a burst of charged particles ejected from the Sun. Radio communications may be disrupted and electricity supplies cut off as happened in Norwich in 1989. The influx of plasma can produce a magnetic storm and/or can produce spectacular aurora (Northern Lights) displays like that seen from the South of England in April this year and photographed by several OASI members. The source of the material for the plasma is an active area on the Sun which may be at the limb or just behind it. Perhaps the big Sunspot group visible now will create an aurora display.

The easiest way to observe sunspots is by projection on to sheet of card or paper from a small telescope or binoculars. I would recommend that novice astronomers should consult recent textbooks and speak to experienced OASI members for advice on how to do projection. Aside from the obvious - don't look through the telescope - other tips I like to pass on are: don't leave equipment unattended indoors or outside because of the risk of someone coming along and looking through it and the risk of setting fire to something, cover up finder scopes which may project the Sun's rays where you are not expecting them and avoid prolonged projection which may overheat and damage the optics (specifically the eyepieces). I heard a story that a professional astronomer of old who used to project the Sun until the eyepiece shattered. He would then replace the eyepiece with a new one!

There are purpose built solar filters from manufacturers like Thousand Oaks which fit over the main objective (big end!) of a telescope and the retailers and literature can provide information on these.

Warning: If you aquifer an eyepiece Sun filter the best advice is do not use it and chuck it away immediately. They are liable to overheat and fail suddenly. In 1976 I bought, with my pocket money, a 10 year old 110mm reflector which had originally been supplied with an eyepiece solar filter. The first owner had consigned to the rubbish bin before selling the telescope.

D 9:54 PM
Oct 08 2000
Ipswich
52°00'N
1°23'E
7971 Stars M6.4
Zoom 2.50
Dir 167° = SSE
Elev 43



Observing Programme For October

Dates	Observing Director	Activities
Mondays from 7.30pm	T Sampson [REDACTED]	General Observation
Tuesdays from 7.30pm	G Coleman [REDACTED]	Group Visits
Wednesdays from 8.00pm	M Cook [REDACTED] D Payne [REDACTED]	Nebular & Faint Objects
Thursdays from 7.30pm	G Coleman [REDACTED]	Group Visits
Fridays from 7.30pm		Miscellaneous

All members are welcome on any night, but on nights other than Wednesday please check with the appropriate director that the observatory will be open.

Special Events

1. Committee Meeting

The next committee meeting is going to be held on Saturday 18th November in the club room at the observatory at 7.30pm. All members are welcome to attend.

2. Open Weekend

The Open Weekend will be held Saturday 7th and 8th October. As much help as possible is needed to ensure smooth running. Please contact any committee member to add your name to the duty rota.

Society Contact Details

	<u>Home Phone</u>	<u>Work Phone</u>
Chairman	D Payne [REDACTED]	[REDACTED]
Secretary	R Gooding [REDACTED]	[REDACTED]

Contact details for the full committee are inside the back page.

e-mail queries: ipswich@ast.cam.ac.uk
 WWW address: <http://www.ast.cam.ac.uk/~ipswich/>

ORWELL ASTRONOMY 2000



THE ORWELL PARK OBSERVATORY ANNUAL OPEN WEEKEND

SATURDAY 7TH OCTOBER FROM 7PM*

SUNDAY 8TH OCTOBER FROM 5PM*

At the Orwell Park School, Nacton, Nr Ipswich.

To mark this 'millennial' year, we present a specially extended exhibition. Apart from the chance to obtain stunning views of the planets Jupiter and Saturn, the Moon and other interesting celestial objects through our various telescopes,

Visitors will be treated to the following additional attractions;

Samples of Moon Rock, collected on the Apollo 16 and 17 missions will be on display, along with a number of meteorite samples.

Join in our interactive display of the Schumaker Levy Comet impacts into Jupiter and learn how nebulae are illuminated and why the Aurora Borealis occurs.

Journey through the solar system with our interactive computerised display.

See the various displays put on by the Orwell Astronomical Society and other local astronomical clubs.

Admission by donation - £1 Adults - 50P Children and Senior Citizens.

* last admissions by 9.30pm

NB There are almost 100 steps up to the main telescope and, we regret, no toilet facilities are available.

For further details, contact Mr K Goward ☎ 01206 391320

A FASCINATING EXHIBITION FOR ALL THE FAMILY