ORWELL ASTRONOMICAL SOCIETY IPSWICH

Charity No 271313

DECEMBER 2001

Society News

1 AGM 12th January 2002

The 2002 AGM will be held on Saturday 12th January 2002, from 20:00. One of the classrooms in the courtyard will be used. Every member is welcome.

As usual the agenda of the AGM will include a review of this years activities, and a look forward to those of the new year.

Part of the meeting will be set aside for a discussion on the future of the 19" telescope now under construction.

At least one member from the 2001 committee has decided to stand down. This committee vacancy will have to filled for 2002. A nomination from has been included with this Newsletter.

2 Events for 2001

Event	Details	Date
Astronomy Workshop	Variable Stars	Wednesday 5th December
Christmas Meal	Oyster Reach Restaurant	Wednesday 12th December 20:00

3 Telescope Review Articles (Old and New)

Society members own a verity of telescopes, both old and new. I would like to request a series of review articles, from members on their telescopes.

The eventual aim would be to product a booklet on member's equipment that can be given to prospective new members, who ask for advice on telescopes.

The first of these articles has been written by Neil Morley, who recently wrote a review about his short focal length 80mm refractor.

Night Sky

All times GMT

Sun

The sun will be rising approximately between 07:40 and 08:05
The sun will be setting approximately between 15:52 and 15:54

Moon

3rd Quarter	New Moon	1st Quarter	Full Moon
7th	14th	22nd	30th

Mercury Mercury is at superior on the 4th, but when it moves back into the evening sky it will not observable.

Venus Venus has moved back into the evening sky this month. It will be setting about an hour after the sun at the beginning of the month. Venus will be lost in the evening twilight this month

Mars Mars moves into Aquarius is month. It will be setting at about 22:00 in mid month. Magnitue 0.6.

Jupiter Jupiter is presently above the horizon through the night, in the constellation of Gemini. The planet will be rising at about 17:00 in mid month. Magnitude -2.5.

Saturn Saturn will also be above the horizon during the hours of darkness, in the constellation of Taurus. Magnitude –0.3

Uranus Uranus is in Capricornus, it will be setting at about 20:40 in mid month. Magnitude 5.9

Neptune Neptune is also in Capricornus, and will be setting at about 19:20 in mid month. Magnitude 8.0

Meteor Showers

Shower	Maximum	Limits	ZHR
Geminids	December 13th	December 7th – 16th	100
Ursids	December 22nd	December 17th – 25th	10

Meteor source is the BAA Handbook

OCCULTATIONS DURING DECEMBER

The following 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
D	22 Dec 19:58	0.49+	-37	27	0.10S	ZC 18	5.8
R	21:12	0.50+	-48	20			
D	25 Dec 20:08	0.77+	-38	48	0.96N	Hip 11228	6.9
D	28 Dec 22:24	0.97+	-56	60	0.49N	105 Tau	5.8
D	29 Dec 04:10	0.98+	-34	22	0.71N	109 Tau	5.0
D	29 Dec 20:06	1.00+	-38	43	0.16N	1 Gem	4.2

The Moon occults Saturn during the month. The following table gives details of the event.

D or R	Date and Time (UT)	Lunar Phase	Sun Alt (°)	Saturn Alt (°)	Min Dist rad	Saturn Mag
D	Sat 01 Dec 02:26	1.00-	-47	47	.05S	-0.4
R	03:35	1.00-	-37	37		

This month's occultation of Saturn is the second of a pair of such occultations, the last having occurred on 3rd November 2001.

Despite the fact that there are two occultations of Saturn in two consecutive months this year, on average less than one occultation of any planet is visible per year from any given location on Earth. It is therefore well worth making a special effort to observe this month's occultation if weather conditions permit.

James Appleton

Lunar Occultation of Saturn

The Moon orbits the Earth, moving prograde, i.e. from West to East in the sky. To an observer in the Northern hemisphere looking due South, the Moon's motion through the stars is from right to left. On average the Moon travels approximately 13° each day along its orbit. The Moon's orbital dynamics are such that it is confined to a strip of the sky centred on the ecliptic (the plane of the Earth's orbit around the Sun) with a width of ±6.75°. This strip is referred to as the Zodiacal Band, since it passes through the 12 constellations of the Zodiac.

Of the planets from Mercury to Neptune, the orbit of Mercury has the largest inclination to the plane of the ecliptic (7.0°). However, even at its closest approach to Earth, Mercury is over 0.5 AU distant and this results in a maximum apparent deviation of 6.25° of Mercury from the ecliptic as seen from an observer on the Earth. The remaining planets (except Pluto) have much smaller maximum apparent deviations from the ecliptic.

The Moon and the main planets (Pluto excluded) therefore occupy the same band of the sky, centred on the ecliptic. The Moon moves much more rapidly through this band than any of the planets. The Moon is also much closer to the Earth than any of the planets. Therefore, it can happen occasionally that the Moon passes in front of a planet and temporarily obscures it as seen from the Earth: when this happens the Moon is said to occult the planet. Although occultations of planets have no scientific value, they provide a fascinating spectacle and are easily accessible to observers with small telescopes or binoculars. Indeed, in the case of the brighter planets, lunar occultations can be visible to the naked eye.

For any particular location on the Earth's surface, lunar occultations of the planets from Mercury to Neptune occur almost once every two years on average. However, the occurrence of such events is very irregular, with many occurring in clusters separated by periods of several years with no events.

We are particularly fortunate that during 2001 two lunar occultations of the planet Saturn occur during the hours of darkness. The following table provides summary details of the 2001 events:

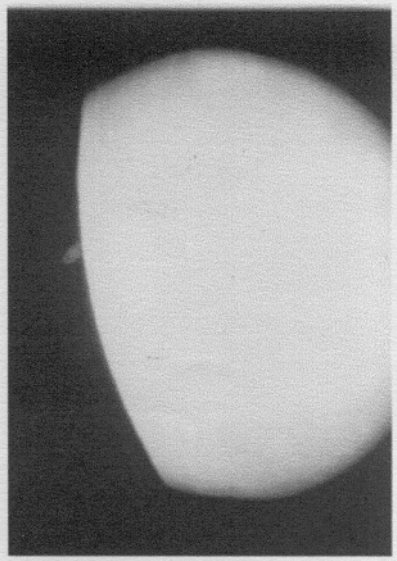
Date and Time (UT)	Lunar Phase	Min Dist from Centre of Moon	Altitude (°)
Sat 03 November Disappear 21:06 Reappear 22:04	0.92-	0.36 N	 27 36
Sat 01 December Disappear 02:26 Reappear 03:35	1.00-	0.04 S	 47 37

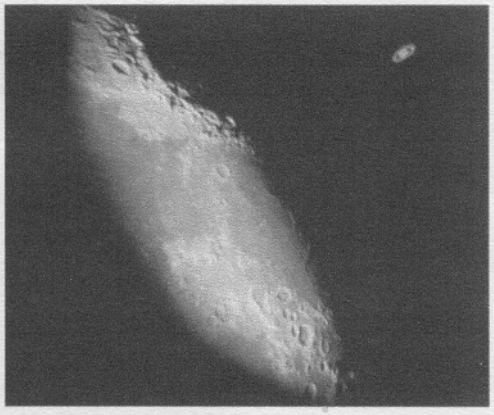
Several members of OASI observed the occultation of 03 November. As usual, our members experienced a wide range of success, failure, confusion and the effects of drink! Here are the observing reports:

James Appleton observing from East Ipswich

I observed the last lunar occultation of Saturn (12 November 1997) visually so thought that I would try photography on this occasion. I took photographs at the eyepiece of my 25 cm Schmidt-Cassegrain telescope using a standard 35mm SLR camera (the afocal method). As usual with this approach, aligning the camera and telescope proved to be the biggest difficulty!

The left image below shows the bright limb of the Moon passing in front of Saturn: an exposure of several seconds was necessary in order to capture Saturn's rings and this resulted in the Moon's image being over-exposed with no detail visible. The right image shows the situation some minutes after Saturn reappeared on the dark limb of the Moon. In this case a much smaller proportion of the illuminated fraction of the Moon was captured in the frame so glare was much reduced and detail on the lunar surface was visible together with the planet.





During the disappearance event seeing conditions were mediocre and there was considerable haze due to early fireworks! However, during the reappearance event seeing conditions were excellent and the atmosphere was extremely still and transparent. I took only a couple of photographs during the reappearance and instead enjoyed the view at the eyepiece. The Cassini division in Saturn's rings was very prominent and I could also clearly see a large dark band on the planet's surface. At

22:30 UT I noticed Saturn's largest moon, Titan, midway between the planet and the lunar terminator. Although Titan is a magnitude 8.1 object it was nevertheless clearly visible despite the close proximity of the bright portion of the lunar disk.

Ted Sampson observing from Manningtree

Having mistakenly agreed to a supper invitation with friends on Saturday night, I knew that to turn up with my Meade LX 50 would be deemed inhospitable! However, binoculars on a stand from the bathroom window of a terraced house in Manningtree was better than nothing and gave a good opportunity to observe the approach of the event, and involve the host and other guests in the excitement. Some were only humouring me, but one or two were keen enough to return to the viewing location for the reappearance. The firework display in the garden next door was a greater attraction for some. But as we know, something is interesting if you think it is!

Ken Goward observing from Tuddenham

Although my home in Tuddenham is in a rural location, it is situated on the southern side of the Fynn Valley and fog/smoke tends to linger in the depression. I was discouraged from setting up my 250mm reflector by smoke from several firework party bonfires locally - the smoke and occasional drifting cloud put me off observing the event. However, by around 10pm most of the firework spectators had retired and I was able to watch the planet through binoculars as it passed out of (from my observation point) a halo around the Moon - a fine sight, which made me regret not properly setting up.

Mike Whybray observing from Nacton

Following a glass of red wine I managed to dash out of the front door and hastily set up my recently acquired Orion 114mm by f=910mm reflector just in time to see Saturn touch and then slide behind the Moon. Returning indoors to finish off the wine I emerged an hour later, having left the scope out, to much better viewing - no doubt the optics had come to thermal equilibrium, plus the Moon was higher in the sky. (*Ed: Plus no doubt the extra wine had improved Mike's eyesight!*) I was very struck by the tiny and almost fragile appearance of Saturn compared to the rugged lunar surface, and the thought that in reality Saturn could swallow the Moon many times over!

Mike Harlow observing from Newbourne

I saw both disappearance and reappearance events. Sue and I used a 60mm refractor and an 8 inch f/5.2 home made Dobsonian. Disappearance was nice to see but nothing special, although the contrast in surface brightnesses of the Moon and Saturn were very noticeable. Reappearance on the other hand was spectacular. The tip of the wide open rings appeared in dark sky well away from the bright surface of the Moon. Seconds later the detached crescent of the rings hung in space before the ball of the planet started to emerge. Eventually the planet and rings became visible with the Cassini division, southern equatorial belt and dusky polar region well seen.

Well worth going out for...

Peter Richards observing from Bristol

The disappearance was clouded out for us in Bristol. Nicky and I called someone in Devon where they reported clear sky so we headed a little way South-West from Bristol to see if we could get out from under the cloud. We arrived at Kenn in North Somerset at around 10pm in time for the reappearance. At Kenn the cloud was sufficiently broken for the ETX to reveal the Moon just before reappearance and again at just after with Saturn close to the dark limb.

Paddy O'Sullivan observing from Kesgrave

I observed from Kesgrave with a 114mm reflector. The sky was clear for both disappearance and reappearance but the Moon was surrounded by a misty glow making observation of Titan impossible. I saw the rings of Saturn very clearly and both disappearance and reappearance of the planet behind the Moon were spectacular (my first observation of such an event). The precise positions and timings of the event were in excellent agreement with a simulation on the *Starry Night* computer ephemeris program.

Dave Payne and Martin Cook observing from Orwell Park

We had previously arranged to observe the event from the Orwell Park Observatory. I had planned to video the event using the ten inch Tomline Refractor while Martin would observe visually using the ten inch Dobsonian reflector. Initially I intended to use the society's low light monochrome camera and use my camcorder simply as the video recorder.

We arrived at the observatory at about 8:00pm and began setting up the instruments and camcorder. I should point out at that we haven't yet made adaptors for connecting video cameras to the telescope so we had to hand-hold the camcorder throughout the observation!

As we had some time before the occultation I decided to try the camcorder on the Moon first. I employed the afocal method which basically replaces the eye at the eyepiece with the camcorder. I used a 50mm Lanthanum eyepiece to give the largest Ramsden disc at the eye lens and then operated the camera zoom lens to vary the overall magnification. I set all camcorder controls to manual so that I could maximise the shutter speed, adjust the aperture or gain and control the focus. I found that as I opened the aperture I could easily over-expose the Moon even on full magnification and I became hopeful that Saturn would also be sufficiently bright not to have to use the low light camera. I then moved to Saturn and found that I could obtain what appeared, in the LCD display of the camcorder, to be sharp, clear, well exposed images and I therefore decided that it would suffice to use the camcorder to record the event. At this time there was some atmospheric turbulence but the seeing was otherwise quite good.

The occultation was a truly spectacular event, particularly the reappearance with Saturn

emerging from blackness and hanging apparently severed in space. The images shown below are stills captured from the video taken by the camcorder through the Tomline Refractor.

Image 1 shows Saturn close to the Moon about 8½ minutes from first contact. The Moon is over exposed in the centre of the field but darkens towards the edge of the Ramsden disk due to vignetting. This was close to minimum magnification with the zoom lens and the Lanthanum eyepiece combination. It should be pointed out that because of being hand held, the position of the camera lens relative to the eyepiece was not optimum. I also found it necessary to use two hands to hold the camera and operate the controls. This meant I was unable to ensure that the image of Saturn stayed in the centre of the field of the telescope eyepiece and to keep it within the camera field, particularly when zooming in and out, I had to tilt the camera off-axis.

Image 2 was taken about five minutes before contact. I had increased the magnification by a factor of three and adjusted the exposure to a compromise between Saturn and the Moon. Cassini's division in Saturn's rings can be seen, also the shadow of the rings on the planet and the darker equatorial belt can just be discerned. There is a blue band on the bright limb of the Moon which is due to the residual chromatic aberration in the Tomline Refractor OG which is not fully corrected in the blue region. The blue fringe is only noticeable on very bright objects such as the Moon.

Image 3 is almost 2½ minutes from contact, slightly reduced magnification to get more of the Moon visible and also increased aperture to brighten up Saturn against the glare from the Moon.

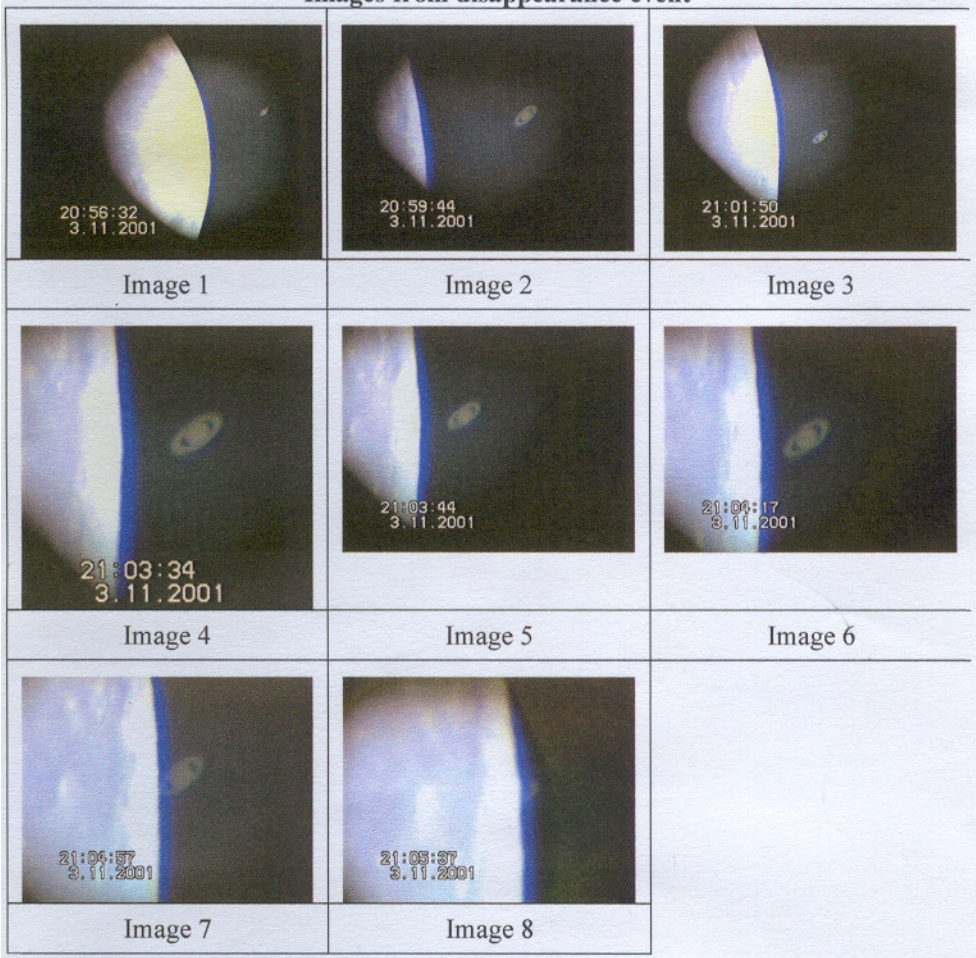
Image 4 was taken at full magnification for this eyepiece and zoom range (I only used optical zoom to maintain maximum quality). It is about 1 minute to contact, the gain has been increased with a consequential increase in noise which is more noticeable on these still image captures than the video. Also at this time the turbulence seemed to be getting worse than simply due to the increased magnification, most noticable by the blurring of Cassini's division which had been quite sharp previously. There was now some thin cloud in front of the Moon which probably accounted for the increasing turbulence and generally poorer seeing.

Images 5 and 6 show Saturn approaching closer to the Moon (strictly the Moon approaching Saturn but the illusion is the other way round!).

Image 7 shows Saturn just after contact. It was very difficult to determine contact precisely because of the turbulence and the best estimate from single frame stepping is 21hrs 4mins 54secs UT.

Image 8 shows Saturn about 43 seconds after contact with only the rings remaining visible.

Images from disappearance event



By the time of the reappearance event all cloud had disappeared and there was much better contrast for the images.

Image 9 shows Saturn just reappearing from the dark limb. Actual reappearance estimated from single frame stepping was at 22hrs 2mins 42secs, so this image is about 6 seconds after reappearance.

Image 10 shows the rings apparently hanging in space as they appear from behind the Moon.

Image 11 shows the globe of Saturn half emerged from the dark limb.

Images 12 and 13 show the complete globe emerging and the trailing ring tip obscured.

Image 14 in the reappearance sequence shows the Moon with Saturn fully emerged.

Images from reappearance event

Image 9

Image 10

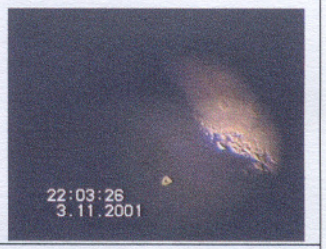


Image 11

Image 12

Image 13

Image 14

The final image is a still capture of Saturn taken a few minutes after the reappearance using a high magnification eyepiece. There is colour fringing which I think is due to holding the camcorder off axis because Saturn had drifted away from the centre of the field of view. Once we construct a mount to fix cameras to the telescope, this will no longer be a problem!

11

And finally, a quote from a nameless member of OASI justifying his reason for not observing the occultation:

I would have liked to observe the event - but - I'd been for a right good massage earlier and zonked out asleep when I got home.

If weather conditions are suitable it is well worth attempting to observe the next occultation of Saturn on Saturday 01 December. Disappearance is at 02:26 and reappearance at 03:35.

James Appleton

Sustainable skies cont.

Thanks to those who provided information in response to my recent newsletter article. The basic message is that, if you are actively concerned, it's worth taking the opportunity to mention them when any public consultation is held on any issues where lighting may be involved. You may like to look at the Ipswich Local Plan from the borough council, which should now be available from local libraries and the council Webster www.ipswich.gov.uk I've suggested in one of their clauses on planning consent that they include controlling light pollution in the conditions of planning permissions.

ASTRO CALENDARS

The astro calendars are in the form of a booklet of over 40 pages with a month by month guide to what's in the sky and interesting celestial events. They are not conventional calendars of dates, but are more of a "what's up guide" with events arranged on a month by month basis. The OASI can offer its members FAS astro calendars for 2002 at £1.50 each. A small profit on each astro calendar will go to the club. It's an excellent publication and I have my copy already. You can buy a copy at the observatory (if you come up please use this method) or send a cheque or postal order for £1.70 (including 20p for excess postage) and we will return a copy with your January journal.

LECTURE ON ET

URGENT:
Contact me immediately, using the club address ipswich@ast.cam.ac.uk or phone [redacted] and leave a message. If you would like free tickets to a lecture by astronomer Heather Couper entitled "ET - Please Phone Earth": a 'fun filled lecture' on the subject of extraterrestrial life aimed at both adults and children.

Entry is BY TICKET ONLY and we have a limited number of tickets for club members. The lecture has been organised by the IBTE (you do not have to belong to the IBTE and the talk IS open to non-BT people). The talk is to be held at 7pm on Thursday the 6th December. I'll give you venue details when you contact me. I apologise for the short notice but the club has only just been given the tickets. The event is fully subscribed and there is a waiting list for tickets so I will be returning any unclaimed tickets on the morning of the Wednesday 5th ..

12

ATTENTION ALL MEMBERS

GIFT AID

A CHANCE FOR THE SOCIETY TO GET SOMETHING BACK FROM THE TAX MAN!!

It's an inescapable truth that Chancellors of the Exchequer normally don't give cash away, but that's exactly what happened a Budget or two back when the tax rebate system for Registered Charities was dramatically overhauled and simplified.

In simple terms it works out like this... **IF YOU PAY INCOME TAX AT THE BASIC OR HIGHER RATE – OR – IF YOU PAY CAPITAL GAINS TAX, AS A REGISTERED CHARITY THE SOCIETY CAN NOW CLAIM BACK 28P FOR EVERY £1 YOU PAY IN MEMBERSHIP SUBS OR OTHERWISE DONATE.**

This can be back dated to 6th April 2000 and even on a conservative guess – if all eligible members co-operate - it means that OASI could be in line for a couple of hundred quid – enough to finance, for instance, the replacement of our accidentally damaged 11 X 80 Binoculars!!!

WHAT YOU NEED TO DO IF YOU WANT OASI TO BENEFIT FROM GIFT AID...

All membership renewal forms (and new member applications) will have an additional section for you to sign. The wording will be along the lines of;

"I want the charity to treat my membership subscription fee as a Gift Aid donation"

You merely need to sign on the dotted line.

For the next renewal only for those of you who have been members since 2000 there will be an additional dotted line to sign which will say something like;

"I want all my donations made since 6th April 2000 to be considered as Gift Aid donations"

That'll allow us to claim the back dated tax relief.

IF YOU DO NOT WISH TO SIGN UP... NO PROBLEM!

Either way, OASI has no wish to pry into your private financial affairs.

If you do sign up it's most unlikely that hoards of bowler-hatted chaps from the Inland Revenue will descend on you and start digging up your garden or whatever, as all the society does is pass on a list of names and addresses of qualifying members who have signed their declarations.

Members who pay income tax at the higher rate can – if they are so inclined – claim further tax relief via their Self-Assessment tax return.

You can also obtain more information on Charity tax relief by asking your tax office for a copy of leaflet IR 65. Or you can check it out., as they say, on the Internet at **www.IR.gov.uk** click on the icon for charitable giving.

Ken Goward
Treasurer

OASI AGM

Saturday 12th January 2002, 8:00pm

The AGM of the Orwell Astronomical Society will take place on the above date please come along!

We will need to form the committee for the 2002 year. All committee posts are available including the offices of Chairman, Secretary and Treasurer. This year two of the existing committee members are retiring and must be replaced.

Apart from the general business at the AGM, this year there will be a debate to determine the future of the 19inch Millennium Telescope project. Please come and put your view forward so that we can get as full a view of the opinion of the membership as possible. Issues to be discussed are do we continue with the project, or do we close it down now and cut our losses but also lose the opportunity of the society owning and using a very large instrument. If we decide to continue then we need to discuss options for overcoming the practical problems of using such a large instrument within the accommodation limits that we have. If we decide to stop the project we need to discuss the disposal issues.

Please come to the AGM listen to the arguments and give your view.

Best Wishes

David Payne
OASI Chairman 2001

A Quiet Weekend -
Reflections from an unemployed exhibitor.

Taking a Meade LX 50 to the Open Weekend to give the visiting public the opportunity of 'backyard viewing' was a nice idea. Alas with 10/10ths cloud over the whole of the U.K. for Saturday and Sunday, the instrument remained in the back of the car, as was the case for several other members who had agreed to be 'outside exhibitors'. I reflected after last years open weekend when Les Lamb and I had our telescpoes in the corridor leading to the main exhibition,that we were rather out of it, as visitors hurried past to get to see the moon rock.But this year, the 'Exhibitors' security badge I wore was a fraud!Upstairs in the dome,and on the balconies, the obseving directors had modest activity, as the Tomline is an exhibit in itself. The pub sign and hospital school clock tower must have felt over-exposed.

However, the modest number of visitors did have a positive side, mainly in that it was possible to give more time to talk to them. For those of us whos function was made redundant, it was possible to drift around and engage the punters in deep (or shallow) conversation on astronomical topics. Ken was asked to check the accuracy of some plans a gentleman had brought who wanted to make a kite in the shape of The Plough. The exhibitors downstairs with computer displays, Anglia Cameras, radio astronomy, and Dave's excellent David Attenborough voice-over to the Saturn occultation gave more time to talk and explain things

There was also time to talk amongst ourselves. There was a continuing vigorous debate around the Anglia Cameras stand about society owned telescopes. Light grasp was the topic, and in particular the value to the society of two very different telescopes, the ETX 125 EC, and the endangered 19 inch Millenium telescope. At the moment we have both.

Because several telescopes were languishing in the back of cars, the idea was mooted that they might be brought again on an occasional Wednesday night, similar to the November workshop, only outside and in use. Members could compare and contrast different instruments, and others might be persuaded to become owners - or not, but with more idea of the pleasure of backyard viewing. Watch this space for more details. So,despite fewer visitors due to cloud cover, it was a valuable and enjoyable weekend. Ted Sampson.

Grant from Ipswich Institute.

Due to a generous grant from the Ipswich Institute, it has been possible for the society to purchase a new telescope. We are now the proud owners of a Meade **ETX 125 EC**, complete with Autostar computer controller. We have to wait for the tripod, which strangely are harder to obtain from meade than the telescope. But hopefully the full outfit will be available at the dome in a few weeks, and the electronic 'go-to' feature will be a source of considerable interest to members. So for those with bad backs and hernias, a more managable telescope will soon be available:and we will be able to get more than one person at a time on the viewing balconies to use it. So our grateful thanks to the Ipswich Institute for enabling us to achieve a long held ambition - the ownership or a modern state of the art small telescope. Information about the Institute is available at the observatory, or from their headquarters in Tavern Street Ipswich. Ted Sampson.

New Committee Members Needed!

For the past six years, I've served on the OASI committee as librarian. I've enjoyed discussing potential library acquisitions with other members and have had fun explaining to the girls at the order desk in the bookstore that the book that I want to order is an obscure astronomical tome that they will have difficulty locating on their computer system! During my six years as librarian, I've purchased 52 books for the library and also acquired a number of other publications, videos and software packages.

But all good things come to an end and it's time now for me to relinquish the date-stamp and let someone else take over the role of librarian and take the OASI library onward and upward! The management committee of OASI will appoint a new librarian at its first committee meeting of 2002. The new librarian can look forward to the opening of the new library in early 2002 following many months of sterling work recently by a small band of committed volunteers.

The management committee of OASI comprises three elected office bearers (chairman, secretary and treasurer) plus six elected members. During 2001, the committee also co-opted one additional member. The committee shares out jobs amongst members. At present, members of the committee share the following jobs (in addition to the office bearers' roles):

- Membership secretary.
- Work party organiser.
- Mechanics (repair and maintenance of the telescope and observatory).
- Newsletter co-ordinator.
- Co-ordinator of informal discussion workshops.
- Visits co-ordinator.
- Equipment co-ordinator.
- Lecture co-ordinator.
- Librarian.
- Dark skies representative.

Participation in committee work does not require special skills, but rather enthusiasm and a willingness to commit a small amount of effort to the

Society on an ongoing basis. The committee holds meetings generally five or six times a year, in the observatory tower.

A regular turnover of committee members is essential to ensure representative management of the Society. So, if you are interested in helping to run OASI (either as librarian or in any other capacity) please consider standing for election to the committee.

If you would like to stand for election to the committee, please attend the forthcoming AGM (8:00pm on 12th January 2002 at Orwell Park School). At the AGM all members of the present committee stand down and it is up the membership of the Society present at the meeting to elect a new committee. Ideally, if you wish to stand for election to the committee, make your intentions known to a member of the present committee in advance. However, advance notice is not compulsory and it is perfectly acceptable to stand for election at the AGM itself – all you need is to persuade a member of the Society to nominate you.

James Appleton

2001 COMMITTEE

		Home Phone	Work Phone
CHAIRMAN	D Payne		
SECRETARY & WORK PARTY ORGANISER	R Gooding		
TREASURER & PUBLICITY	K Goward		
MECHANICS	M Cook		
NEWSLETTER CO-ORDINATOR	E Sims		
BEGINNERS MEETING CO-ORD & VISIT CO-ORD	T Sampson G Coleman		
EQUIPMENT CURATOR	J Walsh		
LIBRARIAN	J Appleton		
CO-OPTED MEMBER			
LECTURE CO-ORDINATOR & DARK SKIES	P Richards		

JOURNAL ARTICLES TO: E Sims [redacted] Ipswich Suffolk IP1 4HA

CORRESPONDENCE ADDRESS: R Gooding OASI Secretary [redacted] Ipswich Suffolk IP1 6AE

MEMBERSHIP: M. Cook [redacted] Ipswich IP4 5PZ

Observing Programme For December

Dates	Observing Director	Activities
Monday		Nothing Booked
Tuesday		Nothing Booked
Wednesdays 5th 19th from 8.00pm	M Cook D Payne	Nebular & Faint Objects
Thursday		Nothing Booked
Friday		Nothing Booked

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. ANNUAL GENERAL MEETING
The Annual General Meeting is to be held on Saturday 12th of January at 8pm in a room near the library at Orwell Park School. All members are welcom to attend.

2. ASTRONOMY WORKSHOP December 5th
Variable Stars. Mike Nicholls.

3. CHRISTMAS MEAL. December 12th
Venue will be the Oyster Reach Bourne Hill Wherstead Ipswich.All places have now been taken.

Society Contact Details

		Home Phone	Work Phone
Chairman	**D Payne**		
Secretary	**R Gooding**		

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/**