

# Orwell Astronomical Society (Ipswich)

Registered Charity No. 271313

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## NEWSLETTER July 2006

No.410



### MOON PHOTO

A picture taken using a web cam pointing through the Tomlin refractor, and connected to a lap top with an automatic stacking program that I didn't understand on Wednesday 7<sup>th</sup> June.

E. Sims

# Society News (Roy Gooding)

## 1 Committee Meeting Saturday 16 or 23<sup>rd</sup> September

The next Committee meeting will be held on Saturday 16 or 23<sup>rd</sup> September, at the Methodist Church Hall, from 20:00. This is an open meeting and any one who is interested is invited to attend. The actual day will not be decided until the Herstmonceux excursion date is known

## 2 Events for 2006

Meeting	Venue	Date
BAA Exhibition Meeting	The Cavendish Laboratory Madingley Road Cambridge	Saturday 24 <sup>th</sup> June 11:00 to 18:00
Society Barbecue At Mike and Sue's garden	██████████ Newbourn Bucklesham Ipswich	Saturday 15 <sup>th</sup> July From around 14:00
Society Excursion to Herstmonceux	Excursion in May has been cancelled New date in September <a href="http://www.the-observatory.org/">http://www.the-observatory.org/</a>	New dates: Either Saturday 16 <sup>th</sup> or 23 <sup>rd</sup> September
Open Weekend	More information in the August / September Newsletter	Saturday 30 <sup>th</sup> September and Sunday 1 <sup>st</sup> October
New series of Astronomy Workshop meetings	Not yet in the planning stage	
Christmas Meal	Levington Ship	Wednesday 13 <sup>th</sup> December

This event list will be updated through out the year

## 3 Access into the School Grounds an Observatory Tower

The gate code is ██████. If the Black door entrance at the base of the observatory tower is locked, you will have to phone someone in the observatory to let you in. My mobile number is ██████. (Roy Gooding)

## 4 2006 Excursion to Herstmonceux

New dates for the excursion to Herstmonceux

- Either Saturday 16<sup>th</sup> or 23<sup>rd</sup>, depending on interest.
- So far the 16<sup>th</sup> is the most popular date
- The closing date for the trip will be the 31<sup>st</sup> July. After July there will be a single Newsletter to cover August and September. October's Newsletter will not be published until after the excursion date, thus making it difficult to communicate to most members.

The excursion will be on the most popular date. As before the minimum number will be set to 30, however ideally this should be raised to between 40 and 50. Attendance is open to all and is not restricted to members only.

I have scraped the old list, and will be starting a new one for these dates. If you would like to come on please contact me. As before, I will only book a coach if there is sufficient interest. Entrance payment will be left to individual members upon our arrival

**5 Society's 40<sup>th</sup> Anniversary Year 2007**  
*Some random thoughts open for discussion.*

2007 will be the 40<sup>th</sup> anniversary year for the Orwell Astronomical Society. A number of events will be held throughout the year to celebrate this. At present, any plans are at a very preliminary stage

- A joint meeting with the BAA in January is in the preliminary planning stage. This meeting will be on Saturday 20<sup>th</sup> January 2007
- All events could be prefixed with "40<sup>th</sup> Anniversary"
- A society meal could be held during the year.
- A formal Astronomical Convention could be held.
- A more informal exhibition meeting could be held that is aimed more for the general public.

If you have any ideas that can be considered please contact me.

**5 Equipment Wish List**

At the March committee meeting, a wish list of additional society equipment was discussed.

Item under consideration	Comments
Laptop PC	Purchased
Eyepiece Cupboard	Purchased
Eyepieces for the small telescopes	
Webcam and equipment for CCD imaging.	Purchased
Coronado solar telescope	
Barlow Lens	
2" Right Angle Mirror Diagonal	
Laser Collimator	
AC587 1.25" Universal Eyepiece Protection Kit	
AC598 Jumbo Eyepiece Protection Kit	
Orion (USA) Soft Rubber Eyeguards	

## 7 Society Email Distribution list

Society information is often distributed at an earlier date than can be achieved by the monthly Newsletter. If you would like to be received society emails, please forward your name and email address to

## 8 Welcome to New Members

Richard Lozinski  
John Wainwright

## 9 Observing Projects form 2006

Many years ago meteor watching field trips were very popular. After a recent Wednesday evening discussion, it was decided to reintroduce a meteor watch later this year. One of the best Meteor displays to watch are the December Geminids

### Treasurer Required

Due to the continued need of Garry Coleman to give full time care to his wife, he feels he can no longer do justice to the job of OASI Treasurer. He will remain in the post until the AGM, but will not stand for re-election.

It is therefore important that a member, be they of long standing or recent, offer their services for this post, which also makes you a committee member. Please give this serious consideration: the AGM will be on us soon! Ken Goward. (Chairman).

## OCCULTATIONS DURING JULY

Only two stellar occultations occur during the month under favourable circumstances. The table below summarises the details. The data relates to Orwell Park Observatory, but will be similar at nearby locations.

Date	Time (UT)	D /R	Lunar Phase	Sun Alt (d)	Star Alt (d)	Mag	Star
04 Jul	22:02:48	D	0.62+	-11	11	8.5	5551-0254-1
05 Jul	22:12:15	D	0.71+	-12	10	7.3	Hip 69998

James Appleton

# Night Sky (July)

All times GMT

## Sun

The sun will be rising approximately between 03:50 and 04:15  
The sun will be setting approximately between 20:20 and 20:00

## Moon

1 <sup>st</sup> Quarter	Full Moon	3 <sup>rd</sup> Quarter	New Moon
3 <sup>rd</sup>	11 <sup>th</sup>	17 <sup>th</sup>	25 <sup>th</sup>

- Mercury** Mercury will be at inferior conjunction on the 18<sup>th</sup>
- Venus** Venus remains a prominent object, low down, in the pre-sunrise morning sky. Rising at about 02:00 through out the month. Magnitude -3.8
- Mars** Mars moves in to Leo this month., it will be setting at about an hour after sunset. Magnitude is 1.8
- Jupiter** Jupiter is in Libra, it will be setting at about 23:00 at the end of the month. Magnitude -2.2
- Saturn** Saturn will be setting near sunset at the end of the month. Magnitude 0.4
- Uranus** Uranus is on Aquarius, and will be rising at about 21:00, at the end of the month. Magnitude 5.7
- Neptune** Neptune is in Capricornus, and will be rising near sunset at the end of the month. Magnitude 7.8

## Meteor Showers Meteor source is the BAA Handbook

Shower	Limits	Maximum	ZHR
Ophiuchids	May 19 <sup>th</sup> to July	June 9 <sup>th</sup> June 19 <sup>th</sup>	5
α Cygnids	July to August	July 21 <sup>st</sup> to Aug. 21 <sup>st</sup>	5
Capricornids	July to August	July 8 <sup>th</sup> July 15 <sup>th</sup> July 26 <sup>th</sup>	5
δ Aquarids	July 15 <sup>th</sup> to August 20 <sup>th</sup>	July 29 <sup>th</sup> Aug 6 <sup>th</sup>	20 10

Meteor source is the BAA Handbook

**Conference Report**  
**“Exterior Lighting, Statutory Nuisance and Light Pollution.”**  
**DeMontfort University Leicester, Graduate Centre, Business School,**  
**on 20<sup>th</sup> April 2006.**

I attended this conference for several reasons. Firstly nobody else was going, secondly light pollution at Martlesham Heath has gone from non-existent to quite noticeable in the 23 years we have lived there and thirdly one of my daughters lives in Leicester having graduated from DeMontfort so I know my way around a bit and I get a free overnight stay! I had hoped I might find how effective the new legislation would be in containing and hopefully reducing pollution in the future, and this would have beneficial consequences not only personally, but also for the Nacton Observatory.

I wish to stress that the opinions, comments and observations in this report are entirely personal and do not represent OASI policy or views (however having spent half a life-time at a large site at MH that cannot be named I feel well qualified to recognise nonsense when I hear it!)

1.0 Attendees.

Initially I had no idea who the attendees might be; I had expected that a number of astronomers would be present and some amateur observatories to be represented. The actual list was:-

I represented the only observatory,

4 attendees from the Campaign for Dark Skies, 2 from the Society for Popular Astronomy

1 from British Astronomical Association, 1 from CPRE, 1 from DEFRA

50 from Councils etc, 2 from Defence Estates, 5 from the lighting Industry.

So by far the largest group was representing local authorities, planners and those with an enforcement or advisory role, who were I guess hoping to find out what they would have to and be able to do under the new regulations, not what I had expected

2.0 Conference

The conference was addressed by 4 speakers, the objective being to overview the background and reasons for the new legislation and to explain the scope the new law. Most of the content was more of a form of an overview than of detail, except for the legal speaker who organised the

conference. At least one of the speakers gave me the impression of trying to make a career by speaking at public events, rather than having a deep desire to create a more natural and sensitive environment.

## 2.2 Light Pollution: Causes and Effect - Bob Mizon CfDS co-ordinator

Bob gave an overview of the various causes of light pollution and the effects on the general population as well as wildlife. Bob emphasised that it was not just a bunch of astronomers that were being troubled by light pollution, but the wider public. He showed some slides of appalling lighting schemes and some very good ones. The general lighting levels were causing sleep and other health problems for the general population in some areas (and indeed for me at MH, where I now have blinds and curtains installed to reduce night time brightness from Ipswich and Grange farm). He sited cases of birds that sang all night because it never became dark enough. (we have a blackbird at MH that seems confused by the ambient light!).

He espoused a cynical view of 'security lighting' schemes and sited cases where turning the lights off reduced crime and nuisance (including the case of the combine harvester stolen from under the newly installed lights designed to prevent theft!). Some of the worst problems are caused by the 500W halogen 'security' light sold to the public. These often caused a light trespass problem as well as pollution. He showed the map of the light pollutions as viewed from space and over the last 20 years it has gone from not too bad to appalling in GB. There is hardly anywhere now that is free from this problem. The amount of energy wasted by UPWARD transmission of light is quite staggering.

## 2.2 The new Law of Lighting as a Statutory Nuisance. - Martin Morgan Taylor, Demontfort

Law School. (Legal Advisor CfDS)

This subject was the only one to which we received a written (14 page) paper. This will be lodged in the OASI library if anybody feels compelled to read it! It does contain some interesting anecdotal examples of 'Green' schemes that fail by the very means by which they are implemented. In particular the one I like is concerned with 'Park and Ride' schemes, the car parks of which are illuminated at night for 'security purposes'. This

illumination produces the very greenhouse gases that the scheme is design to reduce and my fag packet quick calculation indicates that these lights are equivalent to 30 return journeys per day in the best diesel cars currently available (ignoring the pollution caused by the bus!).

Light pollution is taken to mean the invasion of the night sky by thoughtless or excessive illumination, whilst Light Nuisance applies to the more micro level of individual sources. The distinction is not exact, but the new law tackles the more 'micro' level relating to sources by classifying it as 'statutory' in some cases. A working definition of nuisance being 'every form of artificial light that shines outside the area it serves to illuminate, including light which is directed above the horizontal into the night sky, or which causes glare or other nuisance'.

The paper gives some detail reasoning behind reasons why light pollution negatively impacts the population at large as well as nutty astronomers. The new law aims specifically to address the bad effects of 'anti-social' lighting on health though not the wider aspects of more interest to users of the millennium telescope.

The new law adds a new paragraph into s79(1) the 1990 Environmental Protection act, that determines indicates 'Artificial light emitted from premises so as to be prejudicial to health or a nuisance' is a statutory nuisance in respect of which local authorities have enforcement functions. Private action in a magistrate's court is also possible. Major exemptions from the new laws are related to public transport buildings, transport in general and sports facilities (which are some of the worst polluters). Cases of nuisance flooding from neighbours are now mostly covered, even if your park and ride sites next door and Felixstowe docks are not. (well that hits the nail on the head doesn't it!!!) Street lights are not specifically covered under the act, but read the paper for some interesting legal discussion. It is argued that this is a serious and major omission and examples and arguments are given in the paper. The Highways Authority are retro-fitting full cut-off lighting to the major roads, but this policy is not reflected at local level, resulting in worse pollution in dormitory areas than on motorways. It is argued that there is no good reason not to bring street lighting within the scope of the law, because using fittings that don't cause a



nuisance is not difficult and can actually result in better and more effective illumination. The DEFRA representative, when pressed in the plenary session, admitted there would have been no new legislation if the above exemptions had not been included in the bill! The rest of the paper is mainly a discussion of what constitutes the legal definition of 'premises'. Whilst a little esoteric, it is an important point because streets might conceivably be 'premises' in which case street lighting is covered by accident, as it is not specifically excluded.

The main problem with the new law is that it is one of complaint and remedy. What was required was a ban on the sale of 'security' light fittings above say 100W and a requirement to get permission for lighting additions and the use of a prescribed set of approved devices. Furthermore the local authorities are unlikely to have sufficient resources to deal with complaints of statutory light nuisance. (I complained about an all night bird scarer a few years ago and that was difficult to get sorted).

### 2.3 Is Lighting Needed to reduce Crime – Dr Paul Marchant , Leeds Metropolitan University

This was a look at the statistics and evidence associated with the premise that 'security' lighting reduces or prevents crime. Well it was very theoretical and I have no printed notes to go on, but basically this chap rubbished this premise, because the surveys that are and have been undertaken did not involve comparable areas, there has been no before and after survey, there are no 'control' experiments and the statistical analyses are contrived and often incorrect mathematically. So NO, there is no PROVED correlation! Mostly it is scare tactics by the various authorities. Lighting is often used as a 'solution' because the public can see action being taken and it is a cheaper solution than fixing the real problems. Again Paul gave examples of where nuisance caused by aggregation of young people had been reduced or eliminated by turning off or down lights at night around children's play areas.

### 2.4 The Successful Application of Lighting as a Crime Deterrent – Tom Webster, DW Windsor

#### Lighting

This person worried me because he took for granted that there was a case for security lighting. He showed a 'crime triangle' with the three corners being Opportunity, Offender, and Victim. However no justification was

shown as to how *lack* of lighting enabled crime. In nearly every case some poor lighting scheme was improved by increasing the lighting intensity one way or another. Every example he showed of a 'superb' installation that reduced crime or acted as a deterrent was designed by him and implemented by his company! Ok that is a little biased and it did make his case difficult following on from Paul, but I got the overwhelming impression that he was selling lighting schemes and not addressing the pollution or the nuisance issue. He made some valid points about levels of lighting and uniformity and selecting appropriate intensities for specific applications. He gave no examples however of where lighting was deemed inappropriate.

### 2.5 Further Reading

I asked the organiser if copies of the PowerPoint presentations from Bob, Paul and Tom, could be made available as there was only a certain amount of note taking possible. He said they would see if they could be hosted on the CfDS website. Hopefully they are there, I have not looked yet. If they are more information from lecturers 1, 3&4 might well be a useful addition to these notes.

### 2.6 Personal Conclusions and Observations

There seems to be some strange contradictions in the government's energy conservation policies.

What is particularly interesting is that we are encouraged to fit low energy internal bulbs, turn down our central heating, fit approved double glazing, add 150mm or more of loft insulation etc. However, we can have as many external Xmas lights and security lamps as we like. Fly in aircraft all over the planet (especially to G7 meetings!) and expand airports, increase road traffic and lorries, and import cheap goods from countries that don't even try to support Kyoto protocols. I am as bad as most of the population, but if we had a sensible policy I would try to follow it and turning lights off at night or enforcing sensible non polluting illumination schemes retrospectively would be the first move I would make! The current law, although better than nothing, does not really address the real issues and I am very disappointed, but not surprised, to discover that.

Gerry Pilling. BSc(Eng) CEng MIEE

## **The new law against nuisance lighting**

The Clean Neighbourhoods and Environment Act 2005 makes light nuisance subject to the same criminal law as noise and smells, which amending section 79 of the Environmental Protection Act 1990. It applies to "artificial light emitted from premises so as to be prejudicial to health or a nuisance". This law has been introduced because of growing public concern about nuisance light. Conservationists\* and astronomers\*\* have been campaigning for this change in the law for some years, but the recent increase in the number of complaints about nuisance light from 'non-astronomer/non-conservationist' members of the public has brought the issue to a head. The new law is welcome news for the thousands of sufferers of light nuisance. The excuse that nuisance light is needed for security is not an acceptable defence. [ Lighting which is badly directed or too bright is, in any case, a safety hazard and a threat to security.]

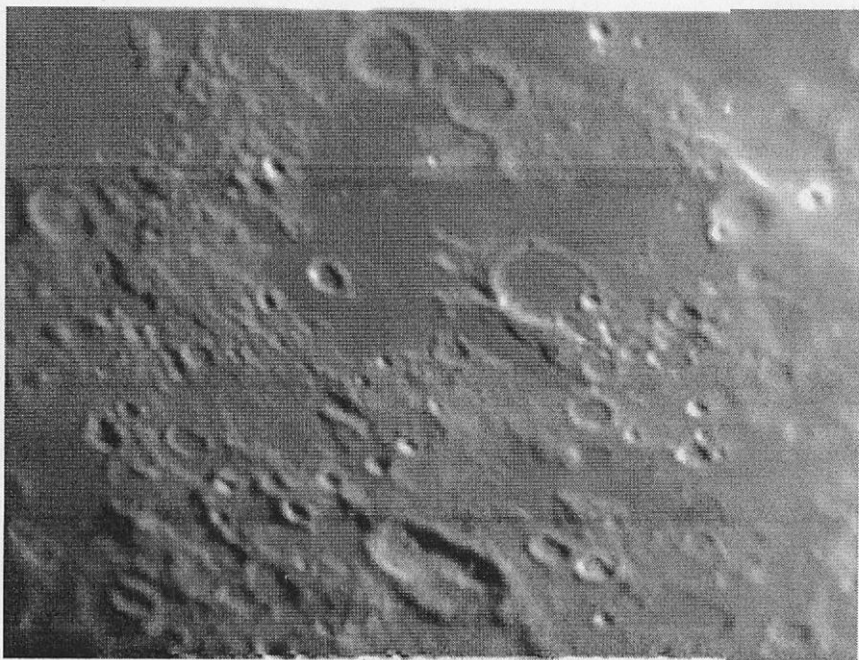
There are exclusions of some specific type of premises, but most are covered. Sports facilities are covered as are nuisance floodlights from all private homes, car parks and many types of business. At one time the intention had been intended that street lighting would be excluded on the (somewhat optimistic) assumption that all local authorities would always use the best designs which avoid causing a nuisance. Other MPs had suggested they should be explicitly included. In the end there was no specific inclusion or exclusion but subject to having to prove they are coming from 'premises'.

In the first instance CfDS always recommend contacting the perpetrator. If the problem is not resolved in this way complainants need to report the lighting to their local authority's Environmental Health Department, who will then have the same powers as for other statutory nuisances given under section 80, Environmental Protection Act 1990. That is, to issue an abatement notice, but the person served with the notice may appeal to the Magistrates' Court within 21 days (section 80(3)). Failure to comply renders a consumer party liable to a fine of £5,000, or a business party £20,000 (section 80 (5&6)). However, injured parties may take proceedings themselves in the Magistrates Court under section 82, with similar penalties for non-compliance with an abatement order. Even if lighting doesn't create a statutory nuisance, it may be deemed a nuisance in civil law as has already been established in the courts.

As DEFRA has said, the new law "provides a first step towards reducing light pollution".

\*The "Night Blight" initiative of the Campaign to Protect Rural England (CPRE).

\*\*The Campaign for Dark Skies.



MOON PHOTO

Another photo taken on the evening of Wednesday 7<sup>th</sup> June.

E.Sims

### OASI - OAOSI

The months of June and July, some would argue, are not the best for astronomical observation, due to the fact that darkness comes rather late in the evening, and is not total (astronomical twilight being defined as 'the centre of the sun being between 12 and 18 degrees below the horizon').

Last Wednesday evening at the dome, OASI members took the opportunity of using suitable optical instruments to engage in some ornithology - not I'm sure, for the first time. Our binoculars, especially the large 20x80s on a stand, were particularly good for this purpose. Five different species of bird were identified, with a vigorous debate as to whether we were looking at a Great black backed, or a Lesser black backed gull.

So compelling was this observing opportunity, it was suggested that at the next AGM, the society discuss the proposal that we should expand our scope and purpose, and insert another 'O' after the 'A', standing of course for 'ornithological'. It isn't hard to say 'OAOSI' - try it!

(Not to be confused with 'SNOWASIS' of course.)

Please come to the AGM to support the idea. Also any opinions on the proposal would be welcomed by our news letter editor, in a time when things are 'a bit thin' as he put it, as far as material is concerned. (How otherwise do you think this got included?)

Ted Samson. (For birds, For people, For - goodness sake.)

## Articles For Newsletter

Every month I am looking for articles for the newsletter. If you can help in any way it would be very much appreciated. What we need are any items of astronomical interest that you have had while observing, events you have attended and things you have planned for the future or even what you would like to do no matter how impossible it might seem at the moment.

Building your own telescope Building an observatory or improving on the equipment that you already have or just getting more use out of what you already have.

Meeting your hero's in the astronomical world. They can be inventors, scientists, astronauts or any one of thousands of people who have contributed to our knowledge and interest in things astronomical.

Now we are in the third Millennium if you think about it almost any thing is possible. Holidays abroad could be any where in the universe. The only thing holding you back now is your imagination.

As you can see we need more members to help keep the newsletter in articles. The more of you that make a contribution the easier it gets for the few who produce articles every month.

Now I hope to hear from a lot more of you in the future which will make the newsletter much more interesting and my job easier.

All entries need to be in A5 format which will save me having to retype any articles and stop me making any mistakes or misinterpretations of things I don't understand.

Newsletter Co-ordinator  
E Sims

## OASI COMMITTEE CONTACTS & RESPONSIBILITIES

Kenneth J Goward FRAS	<b>Chairman</b>	☎		Press & Publicity with the Secretary. Open Weekend.
Roy Gooding	<b>Secretary</b>	☎		<b>MAIN POINT OF SOCIETY CONTACT.</b> Press Publicity with the Chairman. Observatory Decoration. Visits by potential new members.
Garry Coleman	<b>Treasurer</b>	☎		Finance. Supervision of Grant Applications.
James Appleton	Committee	☎		Committee Meeting Minutes. Web site.
Martin Cook	Committee	☎		Membership. Tomline Refractor Maintenance.
Neil Morley	Committee	☎		Equipment Curator.
Ted Sampson	Committee	☎		Tomline Refractor tutoring. Social Activities.
Eric Sims	Committee	☎		Newsletter
Mike Whybray	Committee	☎		Librarian. Workshops
Paul Whiting FRAS	Committee	☎		Visits by outside groups.
Bill Barton FRAS	Committee	☎		Safety & Security
Peter Richards	Co-opted	☎		Lecture Meetings School Lighting liaison Email Distribution Lists

## Diary for July

<b>Monday</b>	<b>Small Telescope Observing Evenings</b> Further meetings by arrangement only ☎ Paddy O'Sullivan [redacted]		
<b>Wednesday</b>	<b>Observatory Club Nights</b> (Nebulae & Faint Objects Section) 5 <sup>th</sup> , 12 <sup>th</sup> , 19 <sup>th</sup> , 26 <sup>th</sup>		
	☎	Home	Mobile
	Martin Cook	[redacted]	[redacted]
Roy Gooding	[redacted]	[redacted]	

Society Primary Contacts				
	☎	Day	Evening	Mobile
Chairman	Kenneth Goward FRAS	[redacted]	[redacted]	[redacted]
Secretary	Roy Gooding	[redacted]	[redacted]	[redacted]
Email Queries <a href="mailto:ipswich@ast.cam.ac.uk">ipswich@ast.cam.ac.uk</a> Contact details for the full Committee may be found on the inside back cover				

<b>Society Trustees</b> Roy Adams David Brown David Payne <b>Hon. President</b> Professor Alan Chapman D.Phil MA FRAS
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☎ Observatory [redacted] Meeting evenings only
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