The Newsletter of the Orwell Astronomical Society (Ipswich)

Registered charity No 271313
www.oasi.org.uk

2009 JULY No 443

ASTRONOMY IN THE PARK

SATURDAY 30th & SUNDAY 31st MAY

CLEAR SKIES ALL THE WAY.

Society News (Roy Gooding)

1 Committee Meeting Sunday 20th September 2009 at 7:30pm

All members are invited to attend the next Committee meeting, on Sunday 20th September at 19:30 at Nacton Village Hall **Please note date, time and venue**

2 Access into the School Grounds and Observatory Tower

Please use the third gate into the school grounds, this is the gate behind the Gym. 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 [redacted]. (Roy Gooding) alternatively the Observatory mobile is [redacted] during meeting hours. The gate code is on the back of your membership card

3 Welcome to New Members

Neal Daley
Mrs Tony Baines
Donald Elliott
Santosh Kawade

4 Events for International Year of Astronomy 2009 (IYA 2009)

Autumn Meetings	Venue	Date
Autumn Open Weekend		Saturday & Sunday 24th & 25th October 19:30 to 22:00
Talk and Telescope Evening	Nacton Village hall	Monday 26th October 19:30
Talk and Telescope Evening	Nacton Village hall	Tuesday 27th October 19:30
Sidewalk Astronomy (Night Observing)	The Ship Levington	Thursday 29th October 19:30
Astronomy in the Park Solar observing	The Reg Driver Visitors Centre Christchurch Park (Bolton Lane entrance)	Saturday 31st October & Sunday 1st November 11:00 to 15:00

The success of our contribution to IYA 2009 is dependent on the enthusiasm of our members. Please come along to as many events as you can.

Telescopes are needed for events at, The Ship, and Astronomy in the Park (preferably solar ones if available)

For more information please contact Paul Whiting or Roy Gooding

5 Other Society Events

Meeting	Venue	Date
Summer Barbecue This has now been combined with Perseid meteor watch	Newbourne Village Hall	Saturday 15th August Barbecue starts at 15:30 to 17:00
Geminid meteor watch	The "Dip" Felixstowe	To be confirmed
Christmas Meal	Not yet confirmed	Wednesday 16th December

6 Summer Barbecue Saturday 15th August

- Venue Newbourne Village Hall
- Open from 14:00 too late
- Barbecue starts at 15:30 to 17:00
- Cost £3 a head. Children free
- Cost will cover hire of village hall and food
- Provided food will be bread, rolls and salad
- Soft drinks, tea and coffee will also be provided
- Bring your own food for barbecuing and drinks.
- If the weather is inclement there will be a buffet in the village hall.
- After the barbecue there is a period of 3 to 4 hours before the next event of the evening. This will give time for anyone that wishes, to give a talk on their experiences on the July eclipse.
- The Perseid meteor watch can not start until it gets dark, which is not until after 22:00 For members who wish to come to the meteor watch only there will be no charge. Please attend at any time after 20:00

Night Sky (July)

All times GMT

Moon

Full Moon	3rd Quarter	New Moon	1st Quarter
7th	15th	22nd	28th

Object	Date	Times		Mag.	Notes
		Rise	Set		
Sun	1	03:49	20:28		
	31	04:25	19:56		
Mercury	1	02:49	19:24		Mercury will not be observable this month
	31	06:01	20:41		
Venus	1	01:29	16:37	-4.2	Venus remains in the pre-drawn sky this month
	31	01:17	17:33		
Mars	1	01:07	16:28	1.1	Mars is also visible in the pre-drawn sky this month
	31	00:06	16:26		
Jupiter	1	22:29	08:15	-2.3	Jupiter is in Capricornus. It will be 0.6° south of Neptune on the 13th
	31	20:26	06:01		
Saturn	1	09:59	23:19	0.6	Saturn is still visible in the western sky after subset. It will be lost in twilight sky by the end of the month
	31	08:17	21:25		
Uranus	1	23:20	11:08	5.8	Uranus is in the morning twilight at the start of the month
	31	21:21	09:08		
Neptune	1	22:24	08:15	7.8	Neptune is in Capricornus. It will be in conjunction with Jupiter on the 13th
	31	20:25	06:13		

Meteor Showers

Shower	Limits	Maximum	ZHR
α Cygnids	July to August	July 21st & August 21st	5
Capricornids	July to August	July 8th July 15th July 26th	5
δ Aquarids	July 15th to August 20th	July 29th & August 6th	20 10

Meteor source is the BAA Handbook

OCCULTATIONS DURING JULY

The table lists lunar occultations which occur during the month under favourable circumstances. 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
03 Jul	21:49:24	D	0.89+	-10	12	5.0	ZC 2298
18 Jul	01:21:40 02:01:44	D R	0.22-	-15 -12	13 19	4.1	Merope
18 Jul	02:01:04 02:20:40	D R	0.22-	-12 -11	19 22	2.8	Alcyone
18 Jul	02:20:49	D	0.22-	-11	22	3.6	Atlas
18 Jul	02:28:20	D	0.22-	-10	23	5.1	Pleione

There is also a grazing lunar occultation of 24 Tau, magnitude 6.3, on 18 July at 02:08. The track crosses land for a few brief kilometres, running through the centre of Orford. Please contact me if you are interested in observing this phenomenon.

James Appleton

VISIBILITY OF DEEP SKY OBJECTS

By Trefor Harries

This article discusses some basic concepts pertaining to the visibility of deep sky objects. Some simple maths is included to provide some equations for calculating visibility factors. Derivations have been included for those who like to understand where these things come from ! These can be skipped over if preferred.

It is obviously desirable to be able to gauge the visibility of deep sky objects before embarking on an observing session. This allows a judgement to be made on the likelyhood of being able to see an object given the size of the telescope and the prevailing sky conditions. The visibility of a DSO depends upon several factors :

- The brightness of the object
- The sky transparency and background glow
- The altitude of the object
- The observing apparatus

Brightness (B)

The brightness of an object depends firstly on its luminance (L). This is the total energy radiated per second, i.e. the radiated power output, and is measured in watts (joules / sec). The perceived brightness (B) then depends upon the radiated power per square metre received by the observer. The energy flux can be considered as being distributed on an expanding spherical shell as it radiates away from the source, and so the density of this flux depends upon the surface area of this sphere ($4\pi r^2$), so we have :

$$B = L / (4\pi d^2)$$

where d is the distance of the object.

Brightness is often quoted as a number on the magnitude scale. This is a scale originated by Hipparchus to designate the brightness of stars on his star catalog. On this scale the brightest star was designated as magnitude 1, and the dimmest observable by the naked eye was designated as magnitude 6. Now the human eye has a logarithmic response, perceiving equal ratios of light intensity as equal differences in brightness, and the intensity ratio from magnitude 1 to magnitude 6 turned out to be approximately 100. This was later formalised as defining magnitude 1 to have 100 times the light intensity of magnitude 6 (notice that magnitude increases as brightness decreases). So, we have that a difference of 5 magnitudes represents an intensity ratio of 100 therefore each difference of 1 magnitude represents a ratio of $\sqrt[5]{100} = 2.512$.

Hence, the magnitude difference ($M_2 - M_1$) corresponding to the brightness ratio (B_2 / B_1) is : $M_2 - M_1 = -\log_{2.512}(B_2 / B_1)$

where the negation signifies that increasing brightness results in decreasing magnitude.
Alternatively, since $\log(x^n) = n \log(x)$ we may write :

$$M_2 - M_1 = \log_{2.512}(B_1 / B_2) \quad \ldots\ldots\ldots\ldots(1)$$

Now, $\log_{2.512}$ is a cumbersome element to work with so we can translate this into a $\log_{10}$ term :

Since, by definition, $a^{\log_a x} = x \quad \ldots\ldots\ldots\ldots (2)$

and $\log_b(x^n) = n \log_b(x) \quad \ldots\ldots\ldots\ldots(3)$

taking $\log_b()$ of both sides of (2) :

$$\log_b\left(a^{\log_a x}\right) = \log_b(x)$$

and applying (3) :

$$\log_a(x)\,\log_b(a) = \log_b(x)$$ or, gathering bases :

$$\log_a(x) = \log_b(x) / \log_b(a) \quad \ldots\ldots\ldots\ldots\ldots\ldots(4)$$

we can now use (4) to rewrite (1) as :

$$M_2 - M_1 = \frac{\log_{10}(B_1 / B_2)}{\log_{10}(2.512)}$$

or more simply as :

$$M_2 - M_1 = 2.5 \log(B_1 / B_2) \quad \ldots\ldots\ldots\ldots\ldots\ldots(5)$$

(5) translates a brightness ratio into a magnitude difference.

Using magnitudes for deep sky objects

The magnitude scale seems straightforward when applied to stars, but when we try to apply it to deep sky objects we have to face up to some troubling subtleties. These arise from the fact that stars can be assumed to be point sources of light whereas deep sky objects are distended sources having area and shape.

So, what do we mean, for example, when we say that a nebula has magnitude 7.3 ? Well, as a first step, we can define this as meaning that the total light received from the nebula equals that received from a star of the same magnitude. This is OK, but we are now in the situation where a given amount of light (i.e. that which would be received from a star of the specified magnitude) is now spread out over a finite area. It is obvious that the greater the area of spread the dimmer the surface will be. This can be demonstrated by shining a torch onto a wall. If you stand close to the wall you see a small circle of bright light. As you walk away from the wall the circle of light becomes larger but also dimmer. This leads to the concept of surface brightness as a measure of an object's brightness per unit area.

Imagine in turn a star, a planetary nebula of, say, a few arc seconds diameter, and a large reflection nebula of, say, several arc minutes diameter, all of the same total (integrated) magnitude. The star will look brightest against the sky background since all its light is focused into a point. The planetary nebula, being

a small object will look less bright than the star because its light is diffused over an appreciable area. The reflection nebula will look least bright since its light is diffused over an even greater area. It should be apparent then that it can be difficult to gauge the potential visibility of a deep sky object just by refering to its integrated magnitude. Not only will this depend upon the apparent size of the object, but also on its brightness profile since it may not be uniformally bright over its presented area. For example a galaxy might have a small bright nucleus surrounded by a larger dimmer area. Even its dimensions can only be an estimate since the extent of the visible area will depend on the viewing apparatus, and the darkness of the sky background. This can be illustrated by comparing different DSO databases - the figures for size and magnitude will often be found to differ markedly from one authority to another.

Despite these difficulties however, the use of the idea of surface brightness to describe a deep sky object will usually be more helpful than a total magnitude in indicating its potential visibility, and will surely be nearer to the truth even if it is only a next approximation. It is unfortunate, and rather surprising, that few sky atlases list figures for the surface brightness of deep sky objects, although this situation is improving. Perhaps this arises from the difficulty of formulating rigorous definitions for their derivation.

Using Surface Brightness

Surface brightness is typically expressed as stellar magnitudes per area. Professional astronomers usually use magnitude per square arc second, whereas amateurs more often use magnitude per square arc minute.

Note that surface brightness is an inherent property of the source; it does not decrease with distance as might be imagined; this is because although the brightness will decrease, the area subtended by the object will decrease in the same proportion so brightness per unit area is unaffected.

Recalling equation (5) :

$$M_2 - M_1 = 2.5 \log(B_1 / B_2) \quad \ldots\ldots\ldots\ldots\ldots\ldots(5)$$

This equation can be re-used to relate a magnitude to a surface brightness : if B_1 is ascribed to the total brightness of the object and B_2 to the brightness per unit area, then M_2 will be the surface brightness as a magnitude and M_1 will be the resulting stellar, (or integrated) magnitude, which is the figure that is usually listed for the object. This is equivilent to integrating the light over the whole area of the extended object to get the total received light emission, then 'focussing' this down to a point to derive a stellar object of the same total brightness. Let us make a simplifying assumption here : since a point has zero area, and zero quantities are difficult to calculate with, lets assume instead that we have a very small circular area. In fact this will indeed be the case anyway since a focussed star image will be a finite size, viz. the size of the Airy disc. To further simplify the subsequent maths let us say that this area is 1 square arc second which is in any case a good approximation for an Airy disc. Hence to facilitate our approximations we have normalised the area corresponding to a stellar magnitude to 1 square arc second. If this area is then 'defocused' so that its light is uniformally spread out over an area equal to that of the extended object, then B_2 can represent the brightness of each square arc second of the extended area, and M_2 will be the corresponding magnitude of each square (i.e. the surface brightness magnitude).

We will now rewrite equation (5) as :

$$M_2 = M_1 + 2.5 \log(B_1 / B_2)$$

Here, M_2 now represents the surface brightness, so we will substitute S for M_2.
M_1 is the integrated magnitude, and we will substitute M for it.
Also, since the brightness figures are inversely proportional the areas we can substitute (A_2 / A_1) for (B_1 / B_2) where A_1, A_2 are the respective areas.

This then gives us :

$$S = M + 2.5 \log(A_2 / A_1)$$

and since we have normalised the smaller area A_1 to be 1 square arc second, we can finally write :

$$S = M + 2.5 \log(A) \quad \ldots\ldots\ldots\ldots\ldots\ldots(6)$$

where A is in sq arc secs and S is in magnitude per sq arc sec.

Equation (6) then gives the <u>average</u> surface brightness of an extended object from its integrated magnitude and its area.

This area, of course, will usually be irregular, but it can be approximated according to the general shape of the object e.g. :

for a rectangular shape : $A = r_1 r_2$ where r_1 and r_2 are the sides
for a circular shape : $A = \pi r^2$ where r is the radius
for an ellipsoidal shape : $A = \pi r_1 r_2$ where r_1 and r_2 are the semi-major and semi-minor axes.

If only the mean diameter d is given, S can be approximated for any shape by .

$$S = M + 2.5 \log[\pi d^2/4]$$

but note that for this to be even approximately accurate d needs to be the geometric mean of the diameters.
Surface brightness figures can be converted between area units by incorporating a scale factor. For example to convert from sq arc mins to sq arc secs :

Rewrite (6) more explicitly as :

$$S_s = M + 2.5 \log(A_s)$$
$$S_m = M + 2.5 \log(A_m)$$

where S_s denotes surface brightness in mag/arcsec^2
S_m denotes surface brightness in mag/arcmin^2
and A_s denotes area in sq arc sec
A_m denotes area in sq arc min

we have :

$$S_s = M + 2.5 \log(3600 A_m)$$

so using $\log(xy) = \log(x) + \log(y)$:

$$S_s = M + 2.5 [\log(A_m) + \log(3600)]$$

and $$S_s = M + 2.5 \log(A_m) + 8.89$$

or $$S_s = S_m + 8.89 \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(7)$$

so, for example a surface brightness of 11.6 mag/arcmin^2 would equate to 20.5 mag/arcsec^2

Background Surface Brightness

The visibility of an object can thus be better gauged by refering to its surface brightness than to its integrated brightness but another factor that needs to be taken account of is the darkness of the sky. This is a large factor as there can be a big difference in visibility between a remote rural site and an urban site. This factor can be incorporated by specifying background surface brightness of the sky. Any part of an object where its surface brightness is less than the sky background surface brightness will probably not be visible, although this may be altered by other influences such as magnification, use of filters etc. A big factor in the visibility of an object is the contrast between the object and the sky background. Using a larger magnification will reduce the surface brightness of the object in the image, but it will also reduce the background brightness, so this should not constitute a large influence. In fact, a larger magnification can sometimes increase the visibility of an object since the background brightness is reduced even more than the object because the smaller angle of view reduces admission of scattered light. Magnification also helps here because a larger object is more readily detected by the eye than a smaller object of the same surface brightness since the total light signal is greater, and more retinal cells are being used in the perception of the image.

The contributors to sky background surface brightness in descending order of influence are :

(1) Sky glow : artificial light pollution, dust smog etc.
(2) Haze : photochemical contamination of the upper atmosphere; vapour trails etc.
(3) Zodiacal light : scattered sunlight from gas and dust in the plane of the solar system
(4) Integrated starlight : scattered starlight
(5) Galactic light : scattered light from interstellar dust and gas
(6) Extragalactic light : scattered light from intergalactic dust and gas

The often quoted estimates for sky background surface brightness for various conditions are listed below. These are in magnitudes per square arc second and assume good transparency and no moon.

Urban skies	: 17.0 - 18.0
Suburban skies	: 18.0 - 20.0
Rural skies	: 20.0 - 21.0
Remote sites	: 21.0 - 22.0
Ideal dark sky site	: 22.0

Spring Astronomy in the Park
IYA 2000
Roy Gooding

Spring Astronomy in the Park was our last spring event for IYA 2009 It was held in Christchurch Park on Saturday and Sunday 30th and 31st of May from 11:00 to about 16:30. A part from few private meetings, this was the first society event that has taken observational astronomy to the public in Ipswich. The event was the culmination of many months of planing with the park manager, Sam Pollard. When I first approached him last July, he was very supportive for us to stage this event in the park. Part of his job remit is to hold as many diverse public events as possible. Our event for filled these criteria completely, namely it would be open to the public and it as far as is known the first public astronomy event ever held in the park. In the past we have always concentrated on showing the public the night sky. As a contrast this event will be showing the public the daytime sky. With the recent advances in solar telescopes and safe filters the sun was a worthy target.

The precursory job was to set up the display in the Reg Driver Centre in the Park. I met Paul Whiting at about 5 pm. on the Friday evening to help him manhandle and erect the society display boards. The site for the event was up the hill immediately behind the Reg Driver centre, part of the area had been picket fenced off for us.

The weather was nothing other than extraordinary, probably the best for any event we have ever held. The skies were completely cloudless for the entire weekend, the first heat wave of the summer. Every one was in summer kit with the occasional appearance of shorts and floppy hats together with fragrance of high factor sun cream. Our site was located between the two park cafés

I arrived at about 10:20 with Eric Sims to find Paul Whiting and Bill Barton had already set up their kit. Paul had also brought along a table for various society information sheets and for his solar projection box. The week before Martin Cook, had received delivery of an 8 feet long society name and logo banner. This was fastened to the picket fence. The equipment in use on the Saturday was, John Wainwright and his 8" reflector with a white light filter, two Coronado PST telescopes (one was Paul's the other was the society's), Bill had his 4" refractor. I brought my 70mm Maksutov for solar projection and a pair of Coronado 12 x 60 solar binoculars. Christchurch Park had never seen any thing like this before. Our area was on the main entry and exit route in the park, at the prime location for attracting passing customers. With all the equipment set up the site looked very impressive,

As an ancillary job we had a duty to inform the public about the dangers of looking at the sun. I had prepared a special notice board for this purpose. I had originally planned to have it on the ground but the consensus was to hang it on the picket fence. Many passing people stopped to read it. On the table I had a large magnifying glass and a sheet of black card to demonstrate the dangers of focusing the sun's light. This proved to be a revaluation, the number of people from school age to some one who admitted to being in her 40's, that had never seen this done before was astonishing. What dose the modern youth do having never played with magnifying glasses, Oh yes I know, never go out into the midday sun, if it can not be seen on a screen it I can not possibly exist.

The only thing out of our hands was the state of the Sun's photosphere. For many months now the surface has been virtually baron of any sunspots. The Sun has not yet woken up from its last minimum. Bill had the foresight to leave his solar telescope at home, and brought along his 4" refractor, to follow Venus. Many of our customers were intrigued on how Bill was able to find Venus in the bright day light sky. He had a running joke, that he arrived in the park before sunrise, and had been tracking the planet ever since. By mid afternoon, Venus became occulted by a near by tree. After this Bill's attention turned to the moon. We had provisionally planned to find Saturn in the afternoon, but any hopes of finding the planet were hindered by a large tree to the east of our observing site. Several prominences were observed with the PST's

Later in the morning Neil Morley and Dee McLeavy arrived, finding that there enough members manning the telescopes they decide to be the events meeters and greeters. They took up positions about 100 yards away and approaching passing groups of people and directing them to our display area. This proved very successful. By about 16:20 we decided it was time to call it a day, and began dismantling our kit.

By 10:30 on Sunday everyone had returned to the park for a repeat performance. John brought along a spectroscope based on design in Sky at Night magazine. It was a classic "Blue Peter" type construction, well it did come from the BBC, using cardboard tubes and a CD to split the light. In the afternoon, one of our newer members, Neal Daley arrived with his PST telescope. There were now 3 PST telescopes in use.

No one attempted to keep a tally on the numbers of people who stopped to have a chat, and to look at the sun and Venus. It was estimated to be about 200 each day. Two people decided to join and paid on the day, and many others took away information leaflets.

At the end of Sunday afternoon everyone was in agreement that our 1st event to take astronomy to a public site in town had been a complete success. In 5 months time (Saturday 31st October & Sunday 1st November) it will be repeated as part of our IYA autumn event programme. There is a possibility that this may become a regular event in the park.

Members who attended on Saturday
Roy Gooding, Eric Sims, Paul Whiting, Bill Barton, Pete and Nicky Richards, John Wainwright, Neil Morley, Dee McLeavy

Members who attended on Sunday
Roy Gooding, Eric Sims, Paul Whiting, Bill Barton, Pete and Nicky Richards, John Wainwright, Tina Hammond, Roy Adams, Mike Whybray, Neal Daley

Finally I would like to thank all members who able to attend and made this event a success.

BOOK REVIEW

STARS AND STORMS - THE LIFE AND WORK OF JOHN ISAAC PLUMMER, VICTORIAN ASTRONOMER AND METEOROLOGIST BY DR JAMES M APPLETON

Long standing members of OASI will recall James Appleton's biography of John Isaac Plummer (JIP) being serialised in the newsletter over the past year.

This excellent 'booklet' (as James modestly describes this epic 200 page A4 size research which took 2 ½ years), is an excellent in-depth study of the life - both personal and professional - and times of JIP, including his time at Orwell Park Observatory, and the A4 format finally does justice to this excellent tome, rather than the A5 we had to make do with in the newsletter serialisation.

Plummer was mainly interested in comets, and probably was delighted when he got the job as astronomer at this new and extremely modern observatory, housing a telescope which was then one of the 25 largest in the world.

His first couple of years appear to have passed by happily enough and without too many complaints, but then Colonel Tomline, his employer, seems to have stopped supplying the things needed for Plummer to continue with his cutting-edge observing, such as operational transit and spectroscopic instruments, and subscription to the Cambridge Observatory Library that would enable Plummer to have up to date information on the skies.

Indeed, the pages dedicated to Plummer's frustration at not being able to observe as much and as accurately as he wished, raises as many questions about Tomline as it offers answers about Plummer. One is left wondering if Tomline was actually interested in astronomy at all, or if his observatory was one large folly to him, albeit one that would serve some purpose in the right hands. Surely Tomline cannot have been so shallow that he felt that it was worth constructing this enormous edifice solely to impress his rich and scientific cronies rather than make real advances in astronomy?

As Tomline was a singularly lone and isolated character with nothing concrete known about his ancestry, and no known spouses or offspring, this will probably remain a mystery unless James decides to dedicate another 2+ years of his life....

Of course, Tomline may have felt that Plummer was adequately rewarded with a huge (for that time) salary of £300 pa - when the average was just £100 - plus a tied home, to be able to afford these things himself. (Who knows, maybe Plummer had a major disagreement with Tomline?)

The book also discusses Plummer's relationship with other astronomers of the day, not all of whom he had a cosy relationship with! This uneasiness was not just limited to any particular point in his life, but is notable from his early professional days (Airy 1864) right until the end of his career when he started at Hong Kong Observatory (Doberck 1894) which was used as a typhoon prediction station.

Excerpts from the local – Ipswich - press are included, as are mini biographies of his extended family, a surprising number of whom followed him into the world of science, with equal or better success and acclaim.

It is easy to criticise Plummer's calculations retrospectively but we have the luxury of computers: if he made an error – which was not corrected upon checking – he was stuck with the results. Unsurprisingly, he seems to have been a better astronomer than meteorologist.

If there is one area in which this splendid book could be improved, in my opinion, then it would be by the addition of a comprehensive index at the back. I have read it enough times to be able to find anything I wish relatively quickly, but for a first time reader I feel that not enough detail and information is given to the chapter titles to give justice to the in-depth and numerous incidents or topics covered by this splendid piece of writing. Then again, a biography is always a work in progress, and new things are constantly being unearthed, so as to make the contents of an index obsolete within a few months.

However, it is an extremely good buy, riveting read, and hopefully will help give publicity to Orwell Park Observatory. Needless to say, this is a book which deserves a place on all OASI members' bookshelves.

If you are really lucky, James will sign it for you with a smile, a flourish and a witty quip!

Availability can be checked by sending an email via the OASI web site, www.ast.cam.ac.uk

WARREN PEACE

Ken Goward

An appreciation by Nicole Airy Swengley

It was with much sadness that I read in the May newsletter of Ken Goward's death earlier this year, especially as he did so much to connect the current members of the Airy family - descendants of Sir George Airy – to the astronomical world and back to Playford.

I first met Ken at a symposium on Sir George Airy at the Greenwich Maritime Museum in January 2001. During this two-day event, in which Dr Allan Chapman gave several fascinating lectures, I met my cousins, James Airy and his sister, Elizabeth Amati, for the first time. I remember Ken's surprise at finding three members of the Airy family there and how astonished he was when I told him that Sir George was my great-great grandfather!

It was typical of Ken's enthusiasm and ingenuity that he asked Dr Allan Chapman to become the Society's honorary president following the symposium and in May 2002 he invited James, Elizabeth and I to attend the first OASI presidential lecture on Sir George Airy which took place at Orwell Park School. We were also present at the dedication ceremony of the Tomline Refractor at which Ken gave me the the honour of unveiling a photograph of Wilfred Airy (my great-great uncle) in the Observatory. It was delightful to see the telescope continuing to give pleasure to so many people 127 years after its original installation.

Ken also made arrangements for us to see the interior of Airy's Cottage and Hill Farm at Playford (the home of Airy's uncle, Charles Biddell, where Sir George spent much of his boyhood). Everything in connection with our visit was meticulously organised by Ken right down to the last detail. He brought flowers to place on the Airy graves at St. Mary's church, arranged for us to meet Brian Seward, the local historian, and even provided a typed hour-by-hour schedule for the occasion!

After a discussion at the Society's AGM, Ken invited James, Elizabeth and I to become honorary members of OASI which we all felt was a great privilege. The following year I attended Dr Chapman's second lecture at Orwell Park School accompanied by my sister, Kristian Perry (also an Airy descendant). We were delighted to have the opportunity to use the Tomline Refractor and were greatly excited to see Jupiter and Saturn very clearly that night.

The next day Ken took the trouble to drive us to Playford to visit the church and ancestral graves. Further visits to Orwell and Playford followed in subsequent years and each time Ken generously gave up his own time to make sure we really enjoyed the occasion. He was always wonderfully organised and everything he did was done with imagination, humour, kindness and modesty.

Looking back at my letters from him – he was an enthusiastic and interesting correspondent – I find one dated 3rd August 2001 in which he describes a visit to Playford on the occasion of Sir George Airy's birthday. He writes: "Playford church was serene and beautiful on the morning of 27th July when my twin, almost three year-old sons and I placed some red carnations on Sir George's grave. The air was heady with scent from a host of wild cornflowers and we offered a prayer to his memory. A large display of white lilies was adjacent to the Airy monument inside the church."

What a delightful tribute to his hero from a very special man. Now may he also rest in peace.

OASI Committee Contacts & Responsibities

Neil Morley	**Chairman**	☎	[redacted]	
Roy Gooding	**Secretary**	☎	[redacted]	**MAIN POINT OF SOCIETY CONTACT** Press Publicity with Chairman. Observatory Decoration. Visits by potential new members.
Paul Whiting FRAS	**Treasurer**	☎	[redacted]	**Finance.** Supervision of Grant Applications. Visits by outside groups. **IYA 2009 Coordinator**
James Appleton	Committee	☎	[redacted]	Committee Meeting Minutes. Web Site.
Martin Cook	Committee	☎	[redacted]	Membership. Tomline Refractor Maintenance.
Peter Richards	Committee	☎	[redacted]	Lecture Meetings. Email Distribution Lists.
Eric Sims	Committee	☎	[redacted]	Newsletter.
Mike Whybray	Committee	☎	[redacted]	Librarian & Workshops.
Bill Barton FRAS	Committee	☎	[redacted]	Safety & Security.
John Wainwright	Committee	☎	[redacted]	Forward planning & Strategy Equipment Curator

DIARY FOR JULY

Monday	**SMALL TELESCOPES OBSERVING NIGHTS AT THE OBSERVATORY** Will resume in October ☎ Paddy O'Sullivan [redacted] ☎ Gerry Pilling [redacted]
Wednesdays **From 8PM**	**MAIN OBSERVATORY CLUB NIGHTS** Primary Observational targets: Nebulae and faint objects. ☎ Martin Cook [redacted] (mobile) [redacted] ☎ Roy Gooding [redacted] (mobile) [redacted]
Wednesday	**OASI WORKSHOP** Will resume in the autumn ☎ Mike Whybray [redacted]
Thursday	**OBSERVATORY VISITS BY LOCAL COMMUNITY GROUP** No outside visits this month **Taster evening** Will resume in the autumn ☎ Paul Whiting FRAS [redacted]
Sunday 20th SEPTEMBER 7.30pm	**COMMITTEE MEETING** **Nacton Village Hall**

Society Primary Contacts

Chairman: Neil Morley ☎ [redacted]
Secretary: Roy Gooding ☎ [redacted] **(daytime)** [redacted] **(evenings)**
E-Mail queries: Ipswich@ast.cam.ac.uk

Society Honorary President

Professor Allan Chapman D.Phil MA FRAS

Meeting nights only

Observatory Telephone Number

[redacted]