



**ORWELL ASTRONOMICAL
SOCIETY (IPSWICH)**

Registered Charity No 271313

www.oasi.org.uk

NEWSLETTER - 2004 DECEMBER

**An early Christmas present for OASI
After years of searching we finally have an image of**



**John Isaac Plummer FRAS
Colonel Tomline's Astronomer at Orwell Park**

More inside...

NEWS FROM THE SECRETARY Roy Gooding

1 AGM Saturday 15th January 2005

All members are invited to this meeting. It will be held in the usual place, in a classroom in the Courtyard at Orwell Park School. Please arrive in time for a 20:00 start.

2 Events for 2004

Meeting	Venue	Date
Astronomy Workshops	Ken Goward The Past Explains The present	Wednesday 1 st December
Christmas Meal	Red Lion Martlesham	15th December at 20:00

3 Events for 2005

Meeting	Venue	Date
Astronomy Workshops	Gerry Pilling Making Friends With The ETX-125	Wednesday 5 th January
AGM	Orwell Park School Class room in Court Yard	Saturday 15th January 20:00 start
Astronomy Workshops	James Appleton Constellation Close-up: Auriga	Wednesday 2 nd February
Lecture Meeting	Members short talks Still being planed	Friday 25 th February
Astronomy Workshops	Bill Barton Positioning Ourselves - A Look At Trigonometry And Spherical Triangles	Wednesday 2 nd March
Astronomy Workshops	Dave McCracken Planetary Atmospheres	Wednesday 6 th April
Lecture Meeting	Dr. Alan Chapman This meeting will take place at Orwell park School. More details when they are available	Friday 22 nd April
Society Excursion	A return visit to the National Space Centre in Leicester will be arranged if sufficient members are interested.	A Saturday in May
Astronomy Workshops	Wednesday 04 May 2005 Paul Whiting Debris of The Solar System	Wednesday 4 th May
BAA Exhibition Meeting	The Cavendish Laboratory Madingley Road Cambridge	Saturday 26 th June
FAS Convention	Institute of Astronomy Cambridge	Saturday 1 st October Date?

4 Find Your Way Round the Night Sky Meetings (The Night Sky Section)



I plan to continue these meetings throughout the winter period if there is sufficient demand from 20:30, on Wednesday evenings when the Astronomy Workshops are not meeting. There will not be any formal dates when these meetings will take place, as it is so dependent on the weather, and my availability.

If on a clear Wednesday members would like to have a meeting, it can be convened straight away. The proposed observing site is on Nacton shores. This is about a 7 or 8 minute walk from the

observatory. **It is important that members bring along a good torch.** The track to Nacton shores can be muddy, so suitable footwear would be advisable. Other items that may be useful are binoculars and simple star maps such Planispheres.

5 Dark Field Site Sort

Many years ago the society use to hold field trip meetings, principally to observe meteors and graze occultations. As the skies are progressively getting brighter from Nacton, Martin Cook has proposed holding observational evenings with portable telescopes from a dark sky site, preferably within about 10 miles of Ipswich. Martin's first suggestion is at Rendlesham forest. If you know of any alternative observing sites please contact either Martin Cook or Roy Gooding. The site needs to have room for several cars and an area to erect telescopes.

6 Another Proposed Meeting, this time with the Lyra AS in Lowestoft

Richard Jewels has recently contacted me about the address to which they should sent the Lyra AS newsletter. Richard mentioned that we could visit their observatory in Lowestoft whenever we wished

7 **Christmas Meal Wednesday 15th December Red Lion Martlesham at 20:00**

8 Welcome to New Members

In the past new members were welcomed officially in the Newsletter. In recent years this old society tradition has lapsed. At the last committee meeting it was decided to reintroduce it. New members who have joined during the last month are:

Mr. John Fulcher Mr. Les Whitmore Mr. Anthony Densham

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

3 rd Quarter	New Moon	1 st Quarter	Full Moon
5 th	12 th	18 th	26 th

Mercury. Mercury will be at inferior conjunction on the 10th. It reaches greatest western elongation on the 29th, when it will be magnitude -0.2 . Venus will close by on the 29th

Venus Venus moves into morning twilight during the month. By the end of the month it will be rising at 06:30. Magnitude -3.8 .

Mars Mars will be low in the SE sky in the predawn sky. Magnitude 1.6.

Jupiter Jupiter will be rising at about 01:00 by the end of the month. Magnitude -1.9 ;

Saturn Saturn will be rising at about 18:00 in mid month. Magnitude -0.3

Uranus Uranus will be setting at about 21:00 by the end of the month. Magnitude 5.7

Neptune Neptune will be setting at about 19:00 by the end of the month. Magnitude 7.8

Meteor Showers

Shower	Maximum	Limits	ZHR
Geminids	December 14 th	December 7 th – 16 th	100
Ursids	December 22 nd	December 17 th – 25 th	10

Meteor source is the BAA Handbook

First Meetings of the Night Sky Section

At the time of writing there have been two meetings of this new society section, on Wednesday 13th October and 10th November. On the first meeting there were just 2 members attending. On the second meeting this increased to 4.

In the past I have always used a narrow beamed torch to point out various constellations, stars and the brighter deep sky objects. For several years green laser points have been advertised in Sky & Telescope for night time use. Martin Cook has recently been keeping an eye on Ebay, with a view to purchasing a green laser pointer for the society. Last Wednesday he brought along this recent acquisition.

OASI OBSERVATIONS OF THE TRANSIT OF VENUS, 08 JUNE 2004 PART III

Compiled by James Appleton

This is part III of a four-part article summarising observations of the recent transit of Venus. Part IV will appear in the January 2005 Newsletter.

6 NIGEL EVANS OBSERVING FROM SHARM EL SHEIKH

The 08 June 2004 TOV was the first to be visible since 1882. Weather permitting, it would be visible in its entirety from the UK but, as with any astronomical event, the weather would play a crucial part in determining what would be seen in practice. Given the broad area of the globe from which the transit would, weather permitting, be visible in its entirety, a key choice to make was whether to stay at home or to go abroad. The prospects for good weather were considerably better in the Middle East than in the UK, tempting the Orwell "Rat Pack" to take the Explorers Tours trip to Sharm El Sheikh in the Sinai.

My usual astronomical escape from the UK is to see a total eclipse of the Sun. The TOV was a special case of an eclipse with a magnitude of some 3% and a total area of obscuration of the Sun of only some 0.1%! There are only a limited number of ways of recording a small black circle moving in front of a large white circle. The sky won't go dark, and some specialised equipment is needed to record the image well. I chose to record the transit with two sets of equipment: a 1000mm f/10 telephoto with a 2x converter onto a digital camera (Canon 10D); and an ETX 90 with a Philips ToUcam webcam. Both were driven on a Vixen mount and would periodically record images of Venus in front of the Sun. I would need to be in attendance for the entire transit - some six hours.

In going to Sharm El Sheikh the probability of seeing the transit was improved, but the daytime temperature was considerably higher than at home - somewhere around 35°C. So the first order of the day would be to arrange shade for me, but this could not be sorted until arrival in Sharm. The webcam would need a laptop, which itself would need a mains power supply as batteries would not last six hours. So a 15m extension lead went to Sharm as well. In using a laptop one of the problems was seeing the screen - after all it would be very sunny. Some means of shielding the screen was needed - hiding under a blanket did improve the view considerably, but it didn't seem the sensible thing to do in temperatures of 35°C or more! The solution was not finally sorted until in Sharm.

I spent the first day in Sharm checking out potential observing sites within the hotels. We stayed in the Mercure, next door to the Ocean Lodge. Ocean Lodge was the main hotel - the BBC was on the roof to relay live images of the TOV back to the UK. Eventually I found a reasonable site in the Mercure - a patio not too far from our room with a power outlet. I also acquired a large cardboard box - more of that later. In the evening Dr John Mason, BAA Public Relations officer, gave a very interesting talk on previous TOVs, mentioning that some expeditions had missed 1st contact because they were looking at the wrong quadrant of the Sun.

For the location of the Mercure (27.87°N, 34.30°E) the important times of the transit were as below (data from the website http://www.nauticoartiglio.lu.it/almanacco/trans_venus_en.htm)

Event	UT	Altitude	Azimuth
1 st contact	05:19:33	31°14'	117°
2 nd contact	05:38:55	35°27'	120°
Least Distance	08:22:19	71°23'	167°
3 rd contact	11:04:34	70°42'	-147°
4 th contact	11:23:40	66°31'	-144°

Local time was UT+3hrs and the Sun was at a much more convenient altitude for 1st contact than from the UK.

Early in the morning of 08 June, about 4:45 am, I taped the mount in place and aligned on Polaris - it seemed the easiest way to align to north! At that hour I suffered two experiences that should be missed: (a) the mosquito man spraying an unpleasant white mist around the hotel (b) the lawns being watered. Grass and water are rare in Sinai, so it was curious how the lawns of the hotel looked so green. Mystery solved - the lawns are watered with "sewage water" which has the aroma of stagnant drains!

I provided some shade by moving one of the poolside umbrellas - as the Sun moved across the sky I could shift the umbrella to keep me and the secondary equipment in the shade. The primary equipment, the two cameras, had necessarily to be in the Sun although they did have small shades to keep the cameras out of direct sunlight. Now for more of the large cardboard box... The laptop screen could only be read when the screen was in shade. But, place the laptop in a large cardboard box, with suitable holes for access to the keyboard, leads and a porthole to see the screen and *voila!* the screen can be seen in comfort. See figure 24.



Figure 24. The sweaty object is Nigel, setting up before 1st contact. The large box on the left contains the laptop

At around 8:20 everyone was out to see 1st contact. At cries of *I can see it!*, I was looking at the laptop screen but could see no notch in the solar disk. A quick adjustment of the ETX revealed..... that I was looking at the wrong quadrant! I wasn't the only one either - the BBC did the same, but fortunately my oversight wasn't on national TV! During the period from 1st contact until beyond 2nd contact I took a webcam sequence and a still frame every minute. Once 2nd contact had passed most people faded away to have breakfast or generally keep in the shade. As I needed to stay with the cameras I was out on the patio for the duration - so for six hours I (a) shifted the umbrella around so as to keep in the shade (b) every 10 minutes recorded a webcam sequence (the digital camera had an intervalometer attached) (c) drank lots of water!

As time went by people popped out to see Venus on the Sun, or wandered round to see what equipment other folk were using. Having equipment of my own meant that I could not wander. Activity picked up towards 3rd contact as everyone scurried out to set their equipment to watch for the teardrop. A little amusement was occasioned at around 11:40 - at that point the Sun reached nearly 86° altitude making it very difficult for altazimuth mounted equipment to follow it. At that time the thermometer showed shade temperatures of 42°C.

So how do my results look?

I have assembled the digital pictures into two mosaics. I think that imaging Venus is really beyond the capabilities of the 1000mm lens - the images of Venus are not

pin sharp. The webcam has the potential to give sharper images, by choosing the sharpest frames and stacking them using a program such as Registax. However my images are degraded because the ETX was slightly out of alignment. Nevertheless I have mosaiced the webcam images together to show the progress of Venus across the face of the Sun and to show a sequence at both ingress and egress. Although we had perfect conditions (no clouds) for viewing the transit the seeing was actually very poor. This was particularly evident in the webcam images - the silhouette of Venus kept dancing about. No doubt being on a brick patio didn't help, but given what I know about the grass areas in the hotel, a brick patio was preferable! See figures 25 - 28.

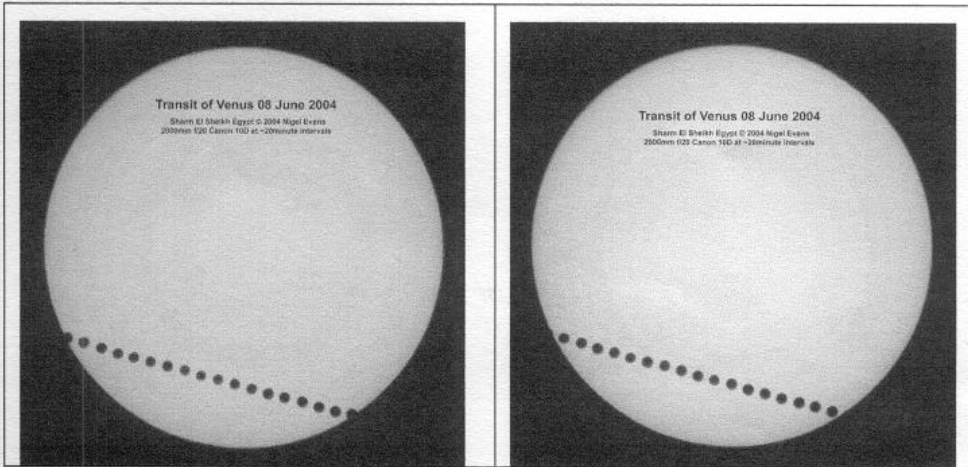


Figure 25. Mosaics taken with the Canon 10D using the 1000mm lens with 2x teleconverter, each with a 20 minute interval between images, the second mosaic being 10 minutes out of step with the first.

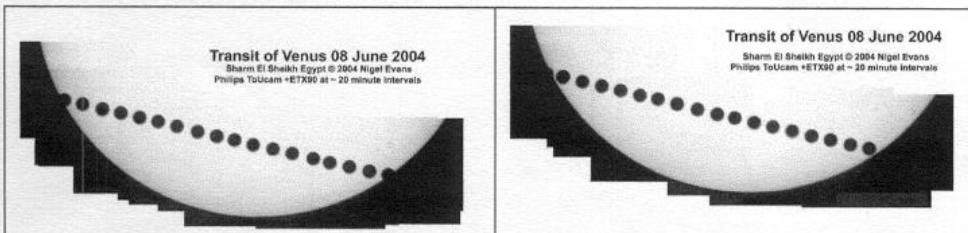


Figure 26. Mosaics taken with the ToUcam on the ETX90, each with a 20 minute interval between images, the second mosaic being 10 minutes out of step with the first. The field of view of each individual frame is much smaller than that of the Canon 10D.

Transit of Venus Ingress 08 June 2004

Sharm El Sheikh Egypt © 2004 Nigel Evans
Phillips ToUcam +ETX90 at ~ 1 minute intervals

Missed first contact. ☹

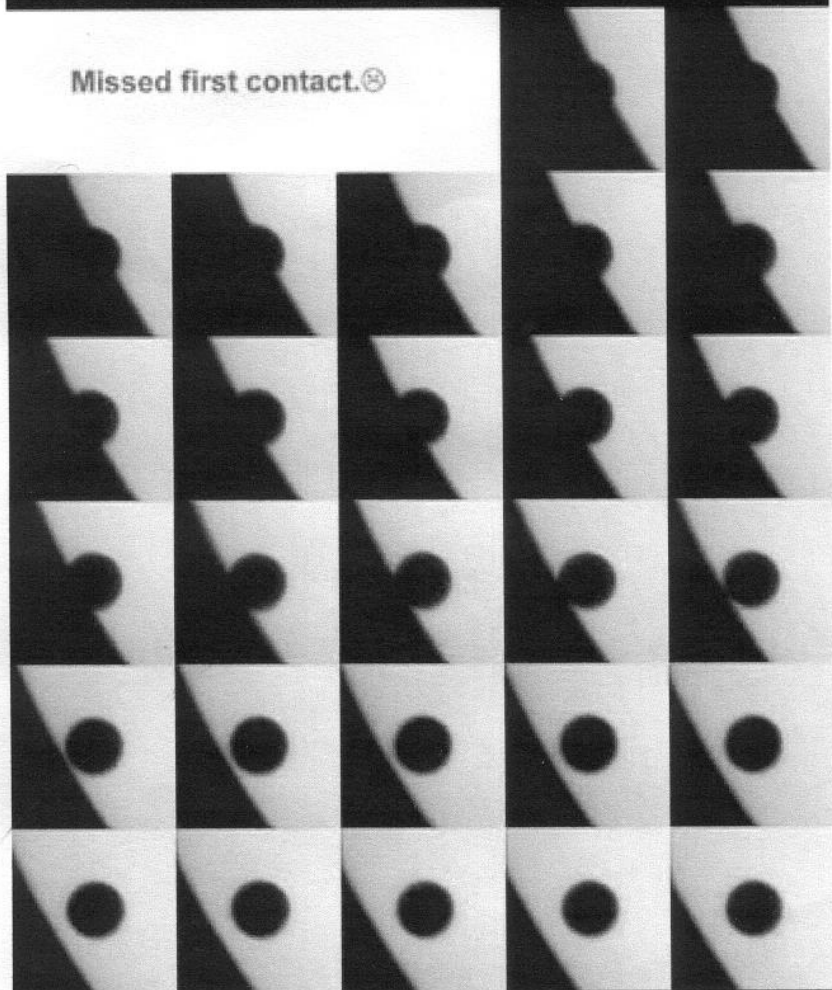


Figure 27. A series of stills at about one minute intervals during ingress, created by stacking the best frames from the webcam.

Transit of Venus Egress 08 June 2004

Sharm El Sheikh Egypt © 2004 Nigel Evans
Phillips ToUcam +ETX90 at ~ 1 minute intervals

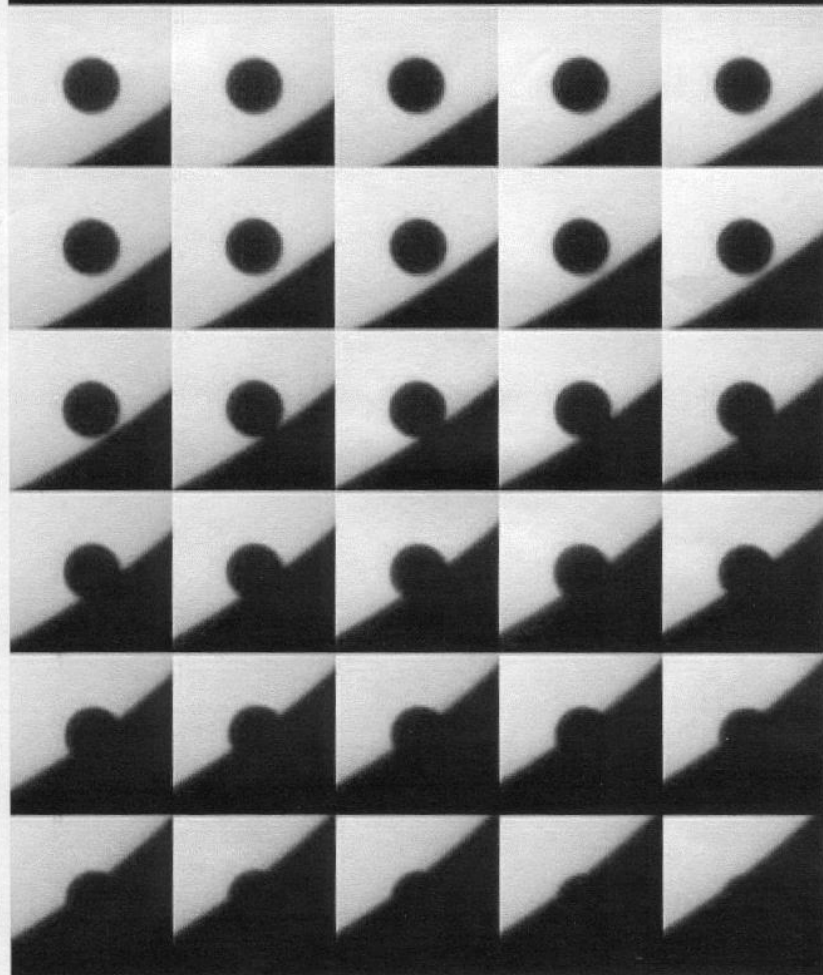


Figure 28. A series of stills at about one minute intervals during egress, created by stacking the best frames from the webcam.

Note that the ingress and egress sequences show very little evidence of the teardrop effect.

On the evening of 09 June we had an opportunity to go into the desert to see the night sky from 28°N, and being June this promised some fine views of Scorpio and Sagittarius. I duly set up my mount and did a test frame on Scorpio - to my horror the stars were trailed. A check showed that the mount was powered but the motor was not moving when on normal speed, but it would move at 16x. It could have been worse - it could have broken the day before. Towards the end of the evening I was able to attach the Canon 10D to Nick James's mount and make a series of pictures with an 8mm lens - see figure 29.



Figure 29. Night sky over Sinai. Nick James kindly stacked several frames together to give an effective exposure of 30 minutes. The bright area at the right is Sharm El Sheikh.

7 PAUL WHITING OBSERVING FROM SHARM EL SHEIKH

I observed the TOV from Sharm El Sheik in Egypt. As events transpired, the whole transit was viewable against perfectly clear, blue skies both at Orwell Park Observatory and in Egypt, so the only "advantage" of travelling to the Sinai Desert was to experience a temperature of 47° C (in the shade). OK - there was another advantage: two hours extra in bed before 1st contact in Sharm!

There was a fair representation of OASI members among the contingent of 280 or so British and one American who had taken over the erstwhile Red Sea divers' stronghold, the Ocean Lodge, and indeed two neighbouring hotels. The Ocean Lodge was to be our base for the next 10 days.

The first few days in Egypt included a quick trip to Cairo and the pyramids of Giza. Here we met the vendors (not beggars you understand). Cries of *You English? Here's a free gift for your wives! You give me a gift now.* This gift usually meant the green folding stuff. *Baksheesh* was the word we came to dread. If anyone did ANYTHING for you they demanded money. Either that or they "accidentally" forgot to give you your change, no matter how large the note you gave them.

And so back to Sharm and the transit. While we had been away the BBC had arrived and installed a satellite dish to beam back to the UK a view from a Hydrogen-alpha telescope mounted on the roof of our hotel. The dedicated astronomers had set up their telescopes, cameras and computers the night before the TOV, locating them on the various roofs around the hotel. Dr John Mason did his usual pre-event talk (well known to Explorers Tours regulars) and mentioned a magnitude -9 Iridium flare, nearly overhead at 4:00 am on the morning of the TOV. It was a measure of people's dedication that only three people of the approximately 200 in the Ocean Lodge bothered to get up: Diana, myself and John Mason. Call themselves astronomers? Pah!

On 08 June, we mere mortals with "minor" equipment - in my case a Solarscope - set up after a leisurely breakfast around the pool area. The Solarscope provided an easily viewed 12cm image, which readily showed the silhouette of Venus and the teardrops at 1st and 4th contacts, although the Sun was too high in the sky to see 3rd and 4th contacts without a deal of limbo dancing. Many folk who had brought only eclipse viewers crowded around the Solarscope image, and this proved to be a good way of passing the boring phase in the middle of the transit.

The output of the BBC image was distributed around the hotel on TVs - watching this in a Bedouin tent added a certain something to the experience. The BBC did some filming around us and even interviewed me but nothing was broadcast. Apparently we were not excited enough at 1st contact.

After the transit there was more time to relax by the pool and a trip to Luxor. Here we experienced the Valley of the Kings, a balloon ride over the Nile, more hieroglyphs, temples and the taxi drivers. The taxi drivers were amazing. If you went out of the hotel and walked for more than 3m they came after you. We explained that we were only crossing the road to get to the river bank. The reply was, *Then where are you going?!* And if the first driver gave up, the next in line took over, thinking that we obviously wanted a taxi but didn't like the first guy.

Final thoughts on Egypt? OK the vendors and the taxi drivers were a nuisance but the people were very friendly, and once you got used to having armed guards wherever you went, the scenery and pharaonic heritage was stunning. Even the heat was bearable with the right clothes and gallons of water.

I'm glad I went, but I do regret missing observing the transit through the Tomline Refractor as the historic links with Airy and the last transit were appealing.

Figure 30 shows some local colour in Egypt – a camel and the Sphinx. Figure 31 shows the observing location and Solarscope. Figure 32 shows the images of 1st and 3rd contact obtained with the Solarscope.

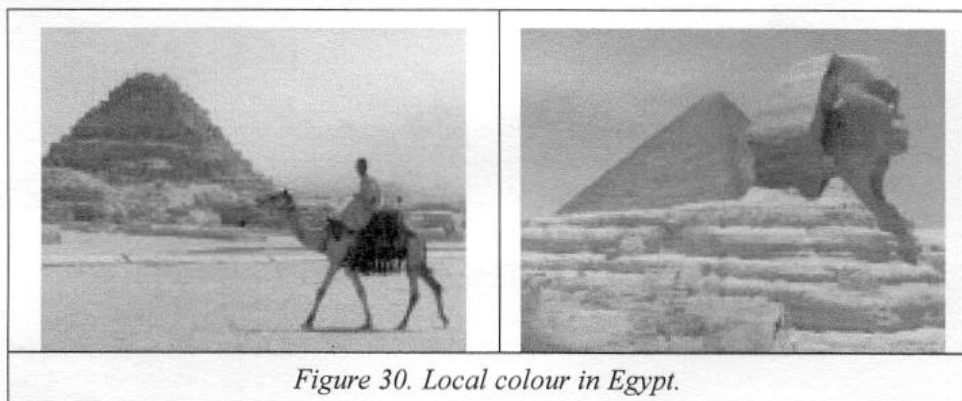




Figure 31. The observing location and Paul's Solarscope.

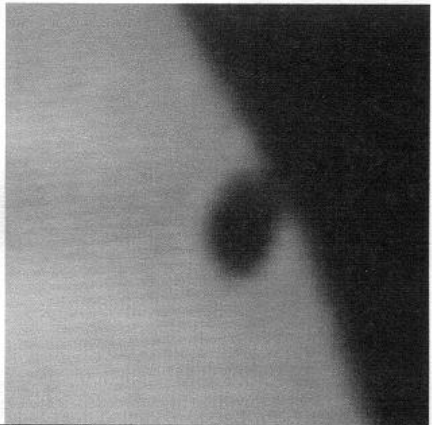


Figure 32. Images of 1st and 3rd contact from the Solarscope.

Next Month

Next month, the final instalment of this article (!) will cover observations by members of OASI observing from the UK, not at Orwell Park, together with a few concluding remarks.



GREETINGS FOR THE FESTIVE SEASON

From the Hon President

My very best wishes to everyone at the Orwell Astronomical Society for Christmas. Christmas, indeed, is one of my very favourite times of the year – not because of parties, but because of peace. Like all astronomers, I love the dark nights (and the cold) and find Christmas a time to read, write, go to Church, and look at the splendour of the Winter sky. And to me personally – and to my wife Rachel – the religious side of Christmas and the celebration of the birth of Jesus Christ, is what is uppermost in our minds. But no matter how you like your Christmases to be, or how you like to celebrate them, may I wish you Peace, Love and Calm through this Christmas tide, and a prosperous and joyous 2005. And never forget, that Christmas is also a time for fun and rejoicing.

Best Wishes, Allan,

Dr Allan Chapman MA D.Phil FRAS Wadham College, Oxford.

From the Chairman

Christmas for me too is a time of great joy and despite having notched up over a half-century score in year terms; the season still holds some of that child-like magic for me – the magic adults often say is lost. Neither is it lost on me that 2004 has been a very good year for Orwell AS and many of us share happy memories of the lovely May weekend when our Library was finally opened and of the long-awaited Transit of Venus, which as many other pages in this issue of the newsletter testify, was a wonderful observing success – as was the Pleiades (M45) observing project. Orwell AS enjoys an enviable reputation, judging by the many favourable comments I hear on my travels to Astronomy meetings and exhibitions around the country. Much has happened in the background too. The Orwell Park School Governors and their Business Manager are making a huge effort to get major repairs underway for the whole of the premises, including the Observatory Tower and we have been consulted all the while. One gets a sense of good will towards Orwell AS and their genuine intention to improve the building fabric, working in partnership with our society. Lastly, it is again my privilege to thank the Committee and other volunteer helpers for another year's hard work. Without their energy and enthusiasm, Orwell AS would be much the poorer. Have a Very Merry Christmas and a Happy New Year!

Ken

Kenneth J Goward FRAS



THE THREE PLUMMERS

By Kenneth J Goward FRAS

Over the past three years or so OASI has been fortunate in finding picture images of four¹ out of the five main players in the history of the Orwell Park Observatory, but one continued to elude us despite our best efforts. We obtained an image of Colonel Tomline from a chap up in Grimsby after placing a marker on our web pages requesting contact from anyone who may know of the existence of an image. Well, the so-called power of the Internet worked for him and we decided to place a similar marker against our missing player – John Isaac Plummer FRAS, Colonel Tomline's paid Astronomer. The Internet has proved its worth once again and OASI has been given a lovely early Christmas present in the guise of two images of Plummer and another of his younger brother by J I Plummer's Gt Grandson, Richard Bellamy-Brown, who lives in Italy. Moreover, not only have we achieved our pictorial ambitions, but also we have learnt that J I Plummer was but one of three professional Astronomers in the family!

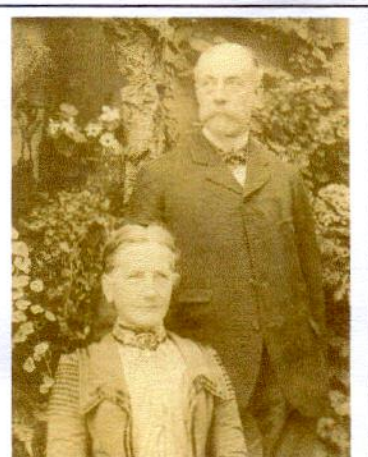
John Isaac Plummer FRAS (1845-1925) needs no further introduction and his career has been well documented on these pages. The cover of this tome carries a portrait image of him, which we surmise would have been taken when he was in his late 50s or early 60s. The below family group image showing Plummer with his wife and daughters is a real gem and, again, must have been taken about the same period of Plummer's life whilst employed at the Hong Kong Observatory.



Based on the 1881 Census recordsⁱⁱ of the family when resident at Orwell Dene, Nacton, we surmise the sitters to be from left to right: Marion M Plummer (daughter) B 1871. John Isaac Plummer. Unknown – probably another daughter born after 1881. Marion M Plummer (wife) B 1847. Euphemia B Plummer B 1877. The census also showed Plummer had a son (John A, B 1878) who is not shown in this image.

J I Plummer's younger brother was **William Edward Plummer FRAS** (1849-1928)

Born in Deptford like his elder brother but unlike John, William had to start from the very bottom of the – *then* – Astronomical career ladder (such as it was) by obtaining at the age of 15 a position as a supernumerary computer at the nearby Royal Observatory. We have another tenuous connection to Orwell Park, insofar as William's talents were such that he was given training on Airy's Transit Instrument and qualified for occasional observing duties. In 1868 he left the Royal Observatory to become an assistant at Mr Bishop's private Observatory at Twickenham.



The above image is – *strongly thought, but not confirmed* – to be that of William Edward Plummer FRAS and his wife.

At that time John Russell Hind was Superintendent at the Observatory and under his 'wing' in company with his fellow assistants, who would all become well-known astronomers in their own rightⁱⁱⁱ, William would often say in later years that any observing skills he had were derived from the tutelage of Hind. Plummer's work at Twickenham included Cometary Observation and orbit prediction and the charting of stars down to the 11th magnitude within three degrees north and south of the ecliptic.

In the late summer of 1874 William was appointed First Assistant at the Oxford University Observatory – almost exactly the same time as John Isaac took up his post at Orwell Park. Working under Professor Pritchard, William's work at Oxford included the Observation of Saturn's Satellites, Double Stars, Comets, photometric determination of the magnitude of stars visible to the naked eye, Photographic measurement of the Stellar Parallax and Photographic investigation of the motion of the companion star to Sirius (Sirius B – *The Pup*).

William also did much work on the international cooperation for the Photographic Astrographic Chart & Catalogue (Carte Du Ciel) and represented Professor Pritchard at the 1891 Conference in Paris when Pritchard's ill health prevented him from attending. In 1889 William received an Honorary MA by the university. Before then, however, he had been appointed to the Directorship of the Liverpool Observatory at Bidston in 1892. He remained in this post until his death in 1928 and the main duties at Bidston were the maintenance of a time service, rating and issue of Chronometers and meteorological observations. He also utilised the Observatory's 8-inch Refractor for Cometary work and the Transit Instrument for the determination of circumpolar star positions.^{iv}

William Edward Plummer's son (J I Plummer's nephew) was **Henry Crozier Keating Plummer** FRS FRAS (1875-1946)



RAS Presidential Portrait of
Henry Crozier Keating Plummer
FRS FRAS

Reproduced by kind permission of
the Royal Astronomical Society

Henry was born at Oxford and educated at St Edward's School and Hertford College, where he excelled in Mathematics. He studied Physics and was then appointed Lecturer in Mathematics at Owen's College, Manchester. In 1900 he was appointed Assistant at the Oxford University Observatory (where his father had served with distinction) and stayed there for 12 years, with one year out as a Research Fellow at the Lick Observatory in the USA. His research interest was in the rapidly expanding discipline of Spectroscopy and American Observatory developments of the science. At Oxford his mathematical abilities were utilised in the study of planetary theory.

He continued, also, in working on the Astrographic Catalogue like his father before him. Other subjects given his mathematical attention included Occultations, Binary Star orbits, Cometary orbits, Instrumentation and the accuracy of eye observations of meteors. Throughout his career he wrote a large number of important papers.

In 1912 he was appointed Royal Astronomer for Ireland and Andrews Professor of Astronomy at Trinity College, Dublin. Working at the Dunsink Observatory with the 15" Reflector he began a long programme of photometric observations of short-period variable stars and analysis of their light curves. In 1918 his book 'An Introduction to Dynamical Astronomy' was published and remains a standard work on the subject. Plummer's papers published in those days included work on radial pulsations of Cepheid stars, work that would later be built upon by Harlow Shapley and Sir Arthur Eddington. All was not well at Dunsink, however, when set against the background of the Irish Independence struggles and Plummer retreated into an almost hermit-like existence at the Observatory.

In 1921 he obtained a Mathematics Professorship at the Military College of Science at Woolwich and was to remain there until his retirement in 1940. In a more congenial atmosphere suited to his quiet manner, Henry went on to publish further Mathematical books and papers. He was also well known for his study of the History of Science and worked on the Royal Society Committee formed to eventually publish Newton's papers. He also researched Edmund Halley and presented the Halley Lecture in Oxford in 1942. He was elected a Fellow of the Royal Society in 1920 and served as President of the Royal Astronomical Society from 1939 to 1940.^v

Three distinguished astronomical careers within one family is a rare achievement. John Isaac and William Edward in many ways had quite similar paths – working in private and University Observatories, obtaining Hon MAs from the latter. Both ended their careers in establishments taking on more meteorological than astronomical work, albeit on opposite sides of the earth! Of the three, however, Henry rose to the greatest heights of achievement.

Acknowledgements. I am grateful to:

Richard Bellamy-Brown (John Isaac Plummer's Gt Grandson) for sending us the images of J I and W E Plummer and for permission to reproduce them.

Peter D Hingley, Royal Astronomical Society Librarian for supplying the image of Henry Crozier Keating Plummer.

Dr Ian Elliott at the Dunsink Observatory, Dublin, for details of H C Plummer's career at Dunsink.

Bibliographical sources:

The Victorian Amateur Astronomer (Allan Chapman) 1998

Dunsink Observatory 1785 – 1985 – a Bicentennial History (Patrick Wayman) 1987

Monthly Notices of the Royal Astronomical Society.

i They are: Colonel George Tomline (1813-1889) John Mac Vicar Anderson (1835-1915), Wilfrid Airy (1836-1925) and Edward Howard Collinson (1903-1990). Images of these individuals can be viewed on our web site.

ii Information supplied by John Barbrook.

iii W E Plummer's colleagues at Twickenham were Norman Pogson, Hermann Vogel, Albert Marth and Charles Talmage. Talmage eventually became Mr Barclay's Astronomer at the Leyton Observatory (See article in OASI Newsletter, December 2003). Talmage was also the astronomer invited to make comparisons between the design features of the Orwell Park Observatory and Leyton, when a paper was read to the Royal Institution of British Architects in 1874.

iv W E Plummer's Biographical details from his Obituary, Monthly Notices of the Royal Astronomical Society 1929, pages 320 to 323.

v H C K Plummer's Biographical details from his Obituary, Monthly Notices of the Royal Astronomical Society Vol 107 pages 56 to 59.

ANNUAL GENERAL MEETING

The 2005 OASI Annual General Meeting will be held on Saturday 15th January in a classroom at the base of the Observatory tower from 8PM.

Whilst it is the case that ALL our 2004 Committee members have worked hard and well to efficiently run the society and all 2004 Committee members will stand for re-election for 2005, it is also the case that ALL Committee posts – including my own – are available for ANY member to stand for. 'Fresh blood' on the Committee, bringing fresh ideas, is the best safeguard to ensure that OASI does not stagnate and drop into a rut. We welcome seconded nominations from any member who wants to make a difference, as they say!

We would also welcome seconded proposals for improvement to the society constitution or constructive proposals for general improvements on the whole range of our activities?

Nominations and proposals should be notified to our Secretary, Roy Gooding.

Kenneth J Goward FRAS
Chairman

The laser had a power of 5mW and was powered by two AA batteries. Its use exceeded both Martin's expectations and mine. Pointing out individual stars was simple. An unexpected bonus was the ease that any one could find Messier objects with binoculars. The laser was pointed at the object, and all the observer had to do was to follow along its light path to the object. This includes showing Martin where M33 was. As far as I know M33 has never been seen with the Tomline refractor, as is a face on galaxy with a very low surface brightness. However it is readily visible with binoculars if you know where to look.

Using any laser has a hazard potential, so some thought will have to be given to various dos and don'ts. The switch is just a push button on the side, and is easily touched unintentionally. A suitable container for it when it is not being used may be useful, as well as standing behind people when it is in use.

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 / R	Date & Time (UT)	Lunar Phase	Sun Alt (°)	Star Alt (°)	Star	Mag
D	05 Dec 06:08	0.48-	-14	46	ZC 1625	5.8
R	07:05		-6	45		
D	16 Dec 18:58	0.29+	-28	15	Hip 110054	7.1
D	17 Dec 17:01	0.39+	-11	28	ZC 3392	7.3
D	17 Dec 20:58	0.40+	-46	13	ZC 3409	7.0
D	18 Dec 19:29	0.51+	-33	31	27 Psc	4.9
R	20:27		-42	27		
D	18 Dec 21:32	0.52+	-51	20	29 Psc	5.1
D	19 Dec 23:00	0.63+	-60	19	ZC 109	6.4
D	20 Dec 16:54	0.70+	-10	36	ZC 214	6.2
D	22 Dec 20:11	0.87+	-39	56	54 Ari	6.2
D	23 Dec 03:30	0.89+	-40	12	Hip 15555	6.9
D	23 Dec 19:13	0.93+	-30	49	32 Tau	5.6
D	25 Dec 17:03	0.99+	-11	19	ZC 844	5.8

James Appleton

A NEW LOOK FOR THE NEWSLETTER COVER

We hope you like the revised layout for the front and rear cover of this newsletter – including the luxury of colour? The colour cover is experimental – experimental in the sense that we'll have to monitor our printing costs and if the expense is too great, well ...

Potential contributors to future newsletters will have the chance to have a colour image from their article or paper on the relevant cover, so long as sufficient notice is given. If you want to have an appropriate image included or, indeed, if you have any suggestions for other cover illustrations or layout improvements, please contact Ken Goward - contact details on the rear and inside rear cover. **It should be stressed, however, that Eric Sims remains the Editor of the newsletter and submissions for publication must be made to him in the first instance.**

Les Lamb, our much-loved cartoonist, no longer has the resource to regularly produce his excellent and topical illustrations, which will be missed. He has, however, been kind enough to supply the seasonal cartoon below, for which we are most grateful.














VERY BEST OF HEALTH AND CLEAR SKIES!

FOR 2005.

LG Lamb
Nov 04

OASI COMMITTEE CONTACTS & RESPONSIBILITIES

Kenneth J Goward FRAS	Chairman			Press Publicity with the Secretary. Open Weekend.
Roy Gooding	Secretary			Main point of Society Contact. Press Publicity with the Chairman. Observatory Decoration. Visits by potential new members.
Garry Coleman	Treasurer			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			Workshops. Tomline Refractor tutoring.
Eric Sims	Committee			Newsletter
Mike Whybray	Committee			Librarian.
Paul Whiting FRAS	Committee			Visits by outside groups.
Monica Lustig	Committee			Safety & Security
Peter Richards	Working under Committee direction but not Co-opted			Lecture Meetings.

DIARY FOR DECEMBER

MONDAY	<u>SMALL TELESCOPES OBSERVING NIGHTS</u> 6 th Perseus 20 th Pleiades & Triangulum ☎ Paddy O'Sullivan [redacted]
WEDNESDAY	<u>OBSERVATORY CLUB NIGHTS</u> 1 st , 8 th , 22 nd & 29 th **PLEASE NOTE THAT THE OBSERVATORY WILL <u>NOT</u> BE OPEN ON WEDNESDAY 15th** ☎ Martin Cook [redacted]
WEDNESDAY 1 st Science Classroom	<u>ASTRONOMY WORKSHOP</u> From 7.45pm 'THE PAST EXPLAINS THE PRESENT' Presented by Kenneth J Goward FRAS ☎ Ted Sampson [redacted]
WEDNESDAY 15 th	<u>OASI CHRISTMAS MEAL</u> Red Lion Public House, Martlesham. From 8pm ☎ Roy Gooding [redacted]
THURSDAY	<u>OBSERVATORY VISITS BY OUTSIDE GROUPS</u> 2 nd 7pm – Amberfield School ☎ Paul Whiting FRAS [redacted]

SOCIETY PRIMARY CONTACTS

CHAIRMAN Kenneth J Goward FRAS ☎ [redacted] (daytime & evenings)
SECRETARY Roy Gooding ☎ [redacted] (daytime) [redacted] (evenings)
E-MAIL QUERIES ipswich@ast.cam.ac.uk
Contact details for the full Committee may be found on the inside back page

Society Trustees

Roy Adams David Brown David Payne
Hon President
 Professor Allan Chapman D.Phil MA FRAS



Have a Very Merry Christmas!