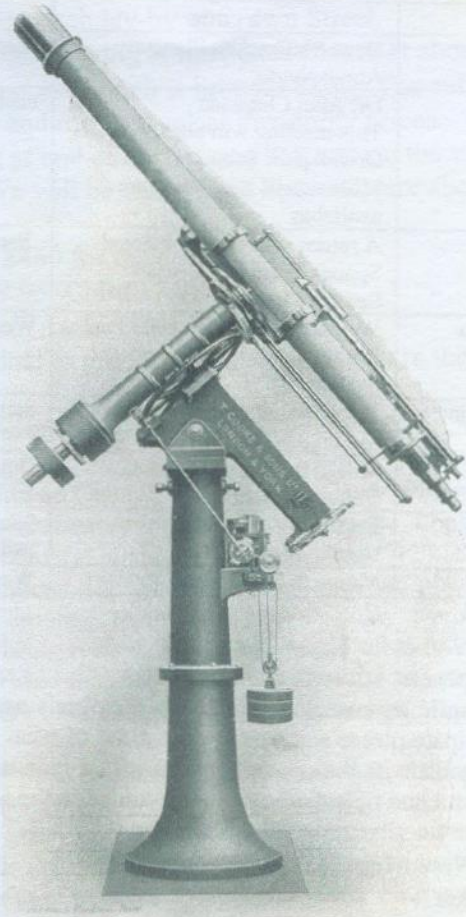
# ORWELL ASTRONOMICAL SOCIETY (IPSWICH)

Registered Charity No 271313
www.oasi.org.uk

# NEWSLETTER – 2005 APRIL



**A Cooke, Troughton & Simms equatorially mounted Refractor, De rigour for better-off amateur astronomers of the 1920s/30s. In 1933 comic actor Will Hay discovered a white spot on the planet Saturn using a 6" (OG) instrument of this type.**

*From Hutchinson's Splendour of the Heavens*

# SOCIETY NEWS FROM THE SECRETARY

***Roy Gooding***

## 1 Next Committee Meeting Saturday 16th April 2005

The next committee meeting will be held on Saturday 16th April 19:30 at the observatory. This is an open meeting and any one who is interested is invited to attend.

## 2 Events for 2005

| Meeting | Venue | Date |
|---|---|---|
| Astronomy Workshops | Dave McCracken Planetary Atmospheres | Wednesday 6th April |
| Lecture Meeting | Dr. Alan Chapman<br>This meeting will take place at Orwell park School.<br>More details when they are available | Friday 22nd April |
| Society Excursion | A return visit to the National Space Centre in Leicester<br>**See note below** | Saturday 7th May |
| Astronomy Workshops | Wednesday 04 May 2005 Paul Whiting Debris of The Solar System | Wednesday 4th May |
| BAA Exhibition Meeting | The Cavendish Laboratory Madingley Road Cambridge | Saturday 25th June |
| Society Barbecue | Still in the planning stage. Venue to be fixed | Date to be fixed |
| FAS Convention | Institute of Astronomy Cambridge | Saturday 1st October Date? |
| Christmas Meal | Venue to be fixed | Wednesday 14th December |

## 2 Society Equipment Inventory

I would like to compile an inventory of society member's astronomical equipment. If you would like to participate please supply me with a list of what observational equipment you have. This inventory list with the relevant names will remain with in the society. Though the total numbers of each class of instrument maybe added to the Society Web site.

## 3 Welcome to New Members

Miss Elizabeth Backer
Miss Jessica Davey
Mr. Roy Spicer
Mr. Brian Jones
Dr. David Firth

## 4 Summer Excursion to the National Space Centre in Leicester Saturday 7th May

So far I have received a total of 38/39 requests to participate in this excursion. There is still room for a few more.

I have booked a 53 seat coach.

The pickup place will be the coach lay-by in Crown Street.
The leaving time will be 8:00, arriving at the Space Centre at about 11:00
I would recommend that a packed lunch is brought along. The café at the space Centre offers refreshments and food at typical monopoly prices.
The coach will be stopping at one of the Service Stations on the way out, and on the return journey home. We will be leaving the Space Centre about 17:30

Costs: A 53 seat coach is £460 for the day
Entrance costs are Adult £9.95 Child £7.95

I will leave it to the individual to purchase tickets once we are there.

### Visit by Loughton Astronomical Society on Saturday 12th March

At the FAS convention meeting on October 2nd, last year, Gerry Workman approached me about a visit to Orwell Park Observatory in the new year, by the Loughton Astronomical Society. The visit was originally scheduled for Saturday 12th February, this was subsequently changed to Saturday 12th March. In the past we played host to visiting Astronomical Societies, by inviting them during a weekday evening. This had the disadvantage of every thing being rushed. The group would often have a long journey to and from Nacton, which restricted the time they could be at the observatory. A few years ago we decided to make it more of an event for the visiting group.

Astronomical Societies are now invited on Saturdays, meeting at the Shepherd and Dog Pub for a chat and a meal, before going on the observatory. I meet the Loughton AS at about 17:15. Unfortunately, many of the members who usually attend these visits were double booked. We waited for Pete Richards and Nicky Gillard to arrive before ordering a meal. The Loughton were happy to order a bar meal. Pete, Nicky and I went into the restaurant for a meal.

A little after 19:00 we all proceeded to the observatory. For the first hour or so the sky remained cloudy. Fortunately the clouds cleared sufficiently to see Saturn. The Loughton AS left very satisfied having used the Tomline.

## Night Sky (April)

All times GMT

**Sun**

The sun will be rising approximately between 05:40 to 04:40
The sun will be setting approximately between 18:30 to 19:30

**Moon**

| 3rd Quarter | New Moon | 1st Quarter | Full Moon |
|---|---|---|---|
| 2nd | 8th | 16th | 24th |

**Mercury** Mercury is back in the early morning sky this month. It will be a difficult object to observe this month. Greatest western elongation is on the 26th

**Venus** Venus will be observable this month. It is setting at around sunset

**Mars** Mars is visible in the morning sky this month .It will be rising before 02:30 by the end of the month . Magnitude +0.7

**Jupiter** Jupiter is presently in Virgo, it will be at opposition on the 3rd Magnitude –2.4

**Saturn** Saturn remains observable during the fist part of the night. Setting at about 01:00 by the end if the month. Magnitude –0.2

**Uranus** Uranus will be rising at about 03:00 at the end of the month. Magnitude 5.7

**Neptune** Neptune will be rising at about 02:00 at the end of the month. Magnitude 7.8

### Meteor Showers

| Shower | Limits | Maximum | ZHR |
|---|---|---|---|
| Lyrids | April 19th to 25th | April 22nd | 10 |
| η Aquarids | April 24th to May 20th | May 4th | 40 |
| α Scorpids | April 20th to May 19th | April 27th & May 12th | 5 |

Meteor source is the BAA Handbook

# OPEN WEEKEND 2005

**Saturday 19th & Sunday 20th March**

Despite unfavourable weather conditions, total overcast on the Saturday evening and the sky not completely clearing until after 8pm on the Sunday, we had a turnout of approximately 100 visitors.

All the society telescopes were deployed, along with our display stand and a sales table offering back issue astronomy magazines. In addition, arrangements were in place for viewing from a large gazebo sited on the school field, which because of the weather was only utilised by visitors using binoculars whilst being shown the constellations by Roy Gooding on the Sunday. A new and very well received feature this year was 'Select-a-talk'. Visitors were asked to vote on a range of astronomy lecture subject options by Paul Whiting. In the event, on both evenings our visitors opted for Solar Eclipses, well, cynics would argue that the sun seems permanently eclipsed hereabouts! Three new memberships were also signed up and we extend a very warm welcome to those concerned.

Many favourable comments have been received by way of feedback, not least below by email from a family who attended on the Sunday:

*"Just a note to say that we had a wonderful time at the Observatory Open Evening tonight; the huge telescope was magnificent, and the balcony telescopes were very interesting and demonstrated by very friendly and informative folk. In addition to this the talk by Paul Whiting on Eclipses was brilliant."*

It only remains for me, on behalf of the whole society, to thank all those members who so kindly and freely gave of their spare time to come along and help out over the course of the event. Your efforts have been very much appreciated and some much-needed extra cash has been raised to boot. **Thank you!**

Kenneth J Goward FRAS
Chairman

# WILL HAY – COMIC ACTOR – SERIOUS AMATEUR ASTRONOMER

By Kenneth J Goward FRAS

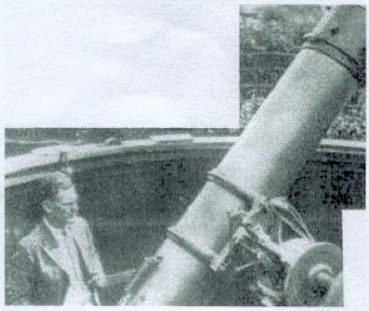
You know, it's both strange and at the same time fascinating, the wildly different takes people have on their Astronomy – and where those fancies can lead one. It is no great secret that my Astronomical penchant is for the history of the science and that, over the years, has drawn me to scour second-hand bookshops and the like in pursuit of astronomy titles long since out of print. One such book was a little tome entitled 'Through My Telescope', published in 1935. Call it the thrill of the chase if you wish – a minor work from the 1930s aimed at the beginner doesn't sound like much to get one's heart racing – but – that little book is VERY sought-after and in the past couple of years has come up twice on ebay – I was outbid both times when the hammer prices grossly exceeded the Three Shillings and Sixpence it originally cost. Why so sought after – well – for anyone of more than a certain age, the name of the author is likely to ring a very loud bell – William Thompson Hay FRAS. In his day one of the great stars of stage and silver screen and revered to this day as a comic genius. And that's why the book is so sought after – not only do musty astronomical tome buffs like me crave a copy – but so do a huge number of his modern fans.

Will Hay was born in 1888. His family moved around a fair bit and he lived variously at Stockton, Lowestoft, Hemel Hempstead and Manchester. He first took a job in engineering at the well-known Westinghouse Company in Manchester and thence into the printing trade. However, at age 21 the lure of the stage proved irresistible and he began to give after dinner speeches and work in the Music Halls, where he developed his well-loved comical Headmaster character in an era where 'six of the best' meant something more than half a dozen cans of dubious Australian Lager from the local supermarket. His career blossomed and in 1935 he made his debut on the silver screen. He starred in many comedy films, the most well-known being 'Convict 99' and 'Oh Mr Porter' in which he played a hapless Station Master on a railway I would (tongue in cheek) venture even our beloved local 'One' would be hard put to emulate for incompetence…! During WWII Will Hay served in the R.N.V.R. Special Branch and also as an Instructor in Navigation and Astronomy. Illness forced him out of the service before hostilities ceased and he never fully recovered, dying of a massive stroke in 1949.

A cigarette card image of Will Hay as he is best remembered playing the comic role of a Headmaster

It seems that Astronomy was a passion for Will Hay for many years, albeit a passion he jealously kept secret for fear of his Comedy Actor celebrity status undermining his credibility as an astronomer. However, the cat well and truly got out of the bag in 1933 when the press heard that Will Hay had observed 'A Spot on Saturn' (Daily Mirror). This caused a feeding frenzy for reporters (sounds familiar eh?) and for a few weeks Hay's worst fears looked to have been realised. Nothing changes and after a month or so the press found something else of world shattering importance to occupy them – *perhaps a new hairstyle for the D Beckham of the day?* – And Will Hay was left alone to resume his passion.

Hay's astronomy - like most us – hitherto consisted of random stargazing whenever time and opportunity allowed. He joined the BAA in 1932 and was elected as a Fellow of the Royal Astronomical Society later that same year. He served on the BAA Council and was a member of the Comet Section. His main observational work was the visual determination of Cometary positions using a cross bar micrometer of his own making. Hay's earlier engineering experience stood him in good stead and in his time built a Chronograph from Meccano parts and a Gramophone motor (described in a BAA Journal in 1932) and also a blink microscope. He replicated all three of these devices for various friends within the BAA.

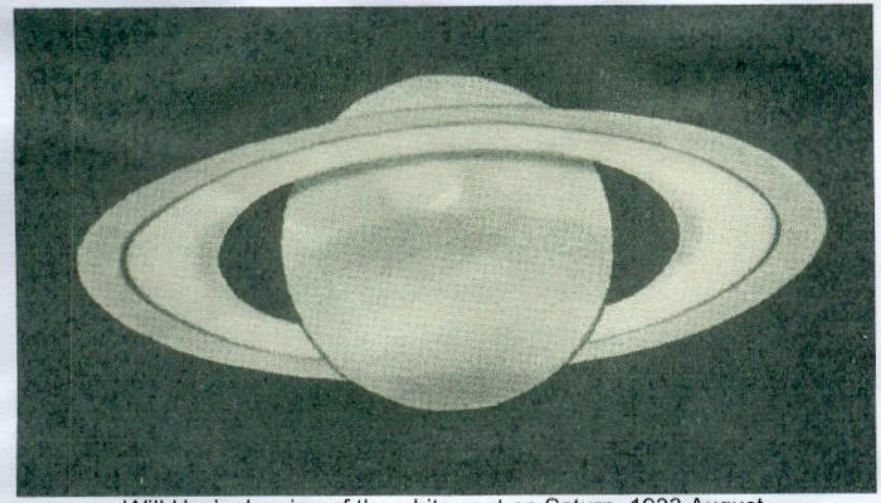


A 1933 press image of Will Hay with his 12" Calver Reflector at his home Observatory in Norbury, SE London.

Towards the back end of the 1920's he acquired a 12" Reflector originally made by East Anglian maker, George Calver. The 1895 vintage instrument had been found in a derelict state and was restored by Hay and BAA stalwart, W H Steavenson, who lived close to him. Will Hay built an observatory at his home in Norbury and housed the Reflector in what can only be described as the bottom half of a large oil drum or silo-like construction. Similar, perhaps, to Sir Patrick Moore's famous oil drum dome, in which he houses his 15" Reflector. Hay's observatory, however, appeared from the only photograph I am aware of to have no roof or dome cover.

Hay also owned a 6" Refractor by Cooke, Troughton and Simms, which he had in a runoff roof shed at Norbury and it was with this instrument that he made his celebrated discovery (an image of this type of instrument appears on the cover of this newsletter). On the evening of 1933 August 3rd (22h 35m GMT) Hay was observing Saturn when he noticed a large bright elliptical spot on the equatorial zone, just after it must have crossed the central meridian of the planetary disc. He immediately telephoned Steavenson to inform him and a BAA Circular was issued directly. Observers at the US Naval Observatory in Washington independently saw the phenomena, but they were about 30 hours behind Hay.

Will Hay made five further observations of the spot up to August 18th and as result of these and observations by others, including other associated smaller spots that had been variously noticed* up to mid September, mean values for the planet's equatorial rotation period of around 10hrs 14minutes were established. The spot was quite prominent whilst it lasted and a young Sir Patrick Moore was able to observe it at that time through his 3" Refractor.



Will Hay's drawing of the white spot on Saturn, 1933 August.
From his book 'Through My Telescope' page 63

When the previously mentioned media fuss died down and Hay had returned to his normal astronomical activities, a small circle of friends within the BAA and RAS managed to persuade him to write his one and only astronomy book 'Through My Telescope'. Written in a plain speaking style, this delightful tome sets out the very basics of the science within its 128 pages, utilising a number of Hay's observational drawings.

In 1948 Hay donated much of his observing equipment to the BAA and after his death the following year, the 12" Calver Reflector passed through several hands and was still in regular use at least up to the early 1990s. Mystery surrounds what became of the 6" Cooke, Troughton & Simms Refractor and I am aware of at least one researcher who is trying to establish its eventual fate. His private observing notes are preserved in the RAS Library collection and I hope eventually to trawl through them with the intention of writing a full paper on him…

Hay was by all accounts a clever individual – variously described as multi lingual, possessed of an appreciation of a wide spectrum of the sciences, a qualified pilot and strangely enough shy and retiring in private life. His public persona forever remains that of a gifted Comic Character Actor. Within the astronomical community his observational and practical contributions will be long remembered.

* Participating public Observatories: Berlin, Rome, Potsdam, UNSO Washington, Flagstaff Arizona, and Stonyhurst in England. Also a number of individual BAA member observations.

**Postscript**

Yes – I have now got a copy of Will Hay's book, but it cost considerably more than its original 3s/6d and, remarkably, I managed to obtain two copies at only slightly less than bankrupting prices within a week of each other after years of fruitless searching. Talk about waiting aeons for a bus and two come along at once! The second copy is now in the possession of another OASI member – and I know he covets his copy as much as I do mine...

**Sources:**


- Will Hay Obituaries published in the Journal of the British Astronomical Association and Monthly Notices of the Royal Astronomical Society.
- Reports on Hay's discovery of the white spot on Saturn, JBAA 1933, November.
- 'Through My Telescope' Will Hay, published by John Murray, 1935.
- 'The Amateur Astronomer' Patrick Moore, 11th edition, CUP 1990.
- 'Good Morning Boys – Will Hay Master of comedy' Seaton & Martin, 1978.'
- My thanks also to Martin Mobberley for sending me a copy of a report of a paper on Hay read to the BAA by Mr R Marriott 1993, January.
- There is an excellent web site devoted to Will Hay – **http://homepage.ntlworld.com/trevor.buckingham/willhay.htm**


---

## CAN YOU HELP?

The below appeal was received on our society web site from Nalaka Abeysekera at the Sri Lanka Planetarium in Colombo. This is a worthy cause and we would like to offer our support by collecting together a small parcel of disused astronomical items to send out to Sri Lanka. If you would like to make a donation, (NOT CASH) please bring whatever you can spare to the clubroom, where a collection crate will be sited.

***"Dear Sir,***

***We are from the Sri Lanka Planetarium and we are the only planetarium in Sri Lanka right now. Lots of school children from all over the country visit our planetarium for our daily shows. Lots of other students from all over the country send us letters and visit our Planetarium asking for various astronomical resources and information. But, we have found that the planetarium shows we are conducting right now are not adequate to fulfil these requirements. Therefore we have decided to form an Astronomy Club at the planetarium to share our Astronomy knowledge among our children more systematically.***

***For this reason we have felt the need for resources about all aspects of Astronomy like history, missions, planetary data etc. But as a third world country our grants are very much limited. Therefore this letter is for asking you to give us your kind participation in whatever way you can in this regard. We greatly appreciate Astronomy books, printed materials, photos, slides, Astronomy software, Astronomy courses, star charts, Astronomy CD/DVDs, VHS tapes or whatever Astronomy resource you may have. We really appreciate if you could donate even a single item. It does not matter if they are used ones.***

***Please help us and give your kind hand to promote Astronomy in Sri Lanka."***

**THANK YOU IN ANTICIPATION OF YOUR GENEROSITY...**

## A Challenge for Orwell Park?

Christopher Taylor, a member of the Society for the History of Astronomy and Director at the Hanwell Community Observatory in Oxfordshire has contacted me to point out in very specific terms a most interesting Double Star observing opportunity for OASI. In his words, ***"Gamma Virginis this spring and for the next year or two, would make wonderful 'quarry' for that beautiful 10inch refractor over at Orwell Park... even that venerable instrument has never seen this happen before!"***

Gamma Virginis (Porrima) is oft referred to as 'The shrinking Double Star' in the Constellation of Virgo. A binary pair of Mag 3.6 type F stars, slightly larger and brighter than our Sun and stellar neighbours at just 35 light years away from us. Relatively easy to find, sitting on the ecliptic line roughly half way twixt Spica and Denebola. Jupiter currently sits just below and slightly to the right.

This metaphorical gauntlet, I feel, – *ought* - to be picked up and we have a golden opportunity here to undertake – *in collaboration with Hanwell* – an occasional observing project for the next couple of years. I set out below the full text of Christopher's communication and if sufficient interest is generated, we'll go for it – as they say. This won't be easy and there are obvious, though not insurmountable issues to resolve regarding our measurement approach and eyepiece power. Please contact me ASP if you'd like to become involved in what may prove a useful scientific exercise and a chance to climb a steep observational learning curve – not least for yours truly!

Kenneth J Goward FRAS
Chairman

## Gamma Virginis 2005

By Christopher Taylor.

Observers, whether devotees of telescopic doubles or not, should be aware that they may be in danger of missing by far the most spectacular binary star event of the century: the now-imminent Periastron passage of Y Virginis. For over 160 of its 169-year period this pair of identical 3rd magnitude stars is easily resolved at moderate power in a small telescope but, thanks to its extreme orbital eccentricity (about 0.9), Gamma closes for 2 or 3 months around minimum to no more than ⅓ arcsecond, a dramatic climax last seen in the winter of 1835-6 by John Herschel, W.R.Dawes and Admiral Smyth. This is not something only detectable by micrometric measurement but a progressive change in the visual appearance of the pair plainly obvious at the eyepiece over an astonishingly short time – we are about to witness the only instance in the entire sky visible from northern latitudes of a bright pair visibly and obviously moving, as seen in a 6" telescope, within a 2-year period. In fact, on the way in this time, Gamma Vir. Has changed its gross appearance completely even in a 4" O.G. in each of the twelvemonths to Spring 2001 ("disks tangent" – they were well separated a year earlier), 2002 ("disks heavily overlapping"), 2003 (a single disk, "olive") and 2004 ("round"), each of these changes being instantly obvious 'by eye'.

A careful analysis of the impressively consistent historical measures from the 1830s has yielded the following results: Firstly, the mutual symmetry of the distance measures on the arcs 1831-5 and 1837-40 implies that minimum separation was reached somewhere about 1836.32, a date within about 2 months of that given independently by the observations of the event itself by Smyth, Herschel and Dawes; on the basis of this concordance of perfectly unambiguous evidence we can finally conclude with a high level of confidence that the apparent appulse occurred on 1836.15±0.07 and that Gamma was quite definitely opening out again by 1836.25-.30. Secondly, the maximum rate of revolution of the system in position-angle, attained in the spring of 1836, was at least 120° per year and may have been substantially larger; this is a considerably higher figure that that usually quoted and has radical implications for the likely minimum separation of the two stars (see below). Thirdly, by matching the Hanwell measures of p.a. taken with the 12½" reflector in the years 1998-2004 onto those of 1829-1835 (a process which, in such a case as this, is, I believe, at least as reliable as any standard orbital ephemeris can be under these very particular circumstances), it appears that this "magnificent phenomenon", as Herschel called it, will fall next in, or about mid-May this year, i.e. 2005.37±0.07.

**The purpose of this article is therefore to alert observers to the imminence of this unique event, which, in default, they may miss entirely if relying on older and now-superseded orbital predictions.** In particular, the commonly quoted Periastron date of 2007-8 (still being given in many current books, sky-mapping programmes and even on some active websites!) is based on Strand's orbit of 1937 which in reality has been defunct now for a decade or more; by spring 2001 its errors were so gross as to be obvious at a glance in a 4" telescope, Strand predicting a distance which would have made the two stars easily separated in that aperture, contra the "disks tangent" actually seen. Anyone still relying on that erroneous ephemeris will therefore miss the action entirely, as by late 2007 Gamma will have opened out again to nearly 1 arcsec. and have slowed once more to a mere 20° per year in revolution. Meanwhile, in fact, the pace has really been hotting up over the last year or so. The morning measure of Gamma with the 12½" on 27th December last showed the pair at about 0.4 arcsec. in p.a. 177° (approx), a closing up of some 40%, and a revolution of no less than 42°, since the corresponding dawn observation of just 12 months earlier.

Evidently, to follow the events of the next few months will be a real challenge, good optics and high magnifications (at least 60 per inch of aperture) being absolute essentials. While the star will certainly appear absolutely single in a 6" telescope at minimum, it will be completely resolved again in that aperture within 2 years, and an acute observer will begin to see the two components clearly opening out and rapidly revolving well before that. In 1836 Smyth with 5.9" O.G. and Dawes, with only 3.8", managed this convincingly only 2 months after closest approach! Here, then, is a challenge to present observers – can you match the Smyth-Dawes record?

A further incentive to observe this remarkable event is that, despite all the many efforts of the orbit computers, we still have very little idea what to expect at apparent Periastron. Persistent astronomical folklore to the contrary notwithstanding, the least separation of Gamma was not determined, or even estimated, in 1836; all we can say on the basis of those observations (Smyth, Dawes and subsequently Struve, who missed the appulse itself) is that minimum distance was almost certainly less than 0.3 arcsec. and probably less than 0.25. This, again, is independently verified by applying Kepler's law of areas to the apparent motion, using the maximum angular velocity quoted earlier, which implies an upper limit of 0.29 arcsec. at closest approach. The computed orbits, on the other hand, right down to the most recent (Soderhjelm 1999) at 0.35 arcsec., have consistently overestimated this parameter[ii].

Gamma has yet another unresolved conundrum for us, however, in that its motion in 1836 actually violated Kepler's law. The observations are unanimous in showing that the rate of revolution peaked some months after closest approach, a violation of Kepler II perhaps most easily explained by the presence of an unseen 3rd body. If this should, indeed, prove to be the case, any predictions based on simple periodicity of the motion – including that made here, and all 2-body orbit computations – may turn out to be inaccurate: 2005 may not be an exact re-run of 1836[iii]. So even here, in one of the most famous of all binaries, the unknown confronts us and surprises may lie in wait. **All of this surely makes for a fascinating observing challenge; to all telescope users the call should go out *"be there, or be square!"***

References

A full account of the work on which this article is based may be found on the Double Star section of the Hanwell Community Observatory website:
**www.hanwellobservatory.org.uk**
For an interesting retelling of the full story of Porrima see Bob Argyle's article 'Porrima: a Close Approach' in Patrick Moore's 2005 Yearbook of Astronomy.

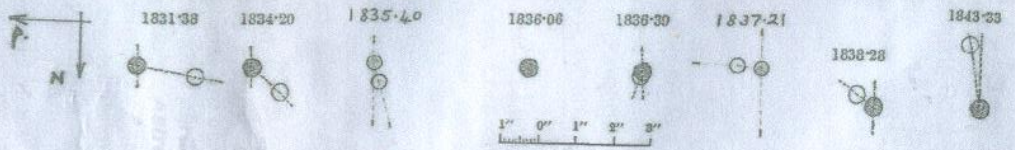
---

[i] *0.4 arcsec. – I make no apology for claiming such performance from a 12½" reflector used at a lowland site in the English Midlands; see chapter 11 in R.W.Argyle (Ed.) 'Observing and Measuring Visual Double Stars' Springer, London 2004 (copy available in the OASI library). As is my custom with 'subarcseconds', this observation was made at X825; only 2 years ago X238 sufficed for this purpose.*

[ii] *It is interesting to note that there has also been a long-standing mismatch between the efforts of the orbit computers and KeplerII; the apparent areal velocity A is related to the standard orbital elements a, the semi-axis major in arcsec., e, the eccentricity, i, the inclination of the orbital plane, and P, the period by the equation* $A \equiv \frac{1}{2}p^2\emptyset' = [\pi a^2 \cos I \sqrt{(1-e^2)}] \div P$ *where the p.a.* $\emptyset$ *is in radius, but the value of the areal velocity so obtained from the computed orbits has been consistently too high, when compared with that determined directly from the best (p.* $\emptyset$*) measures. Over the last 100 years there has been a steady upward trend in the values of e favoured by computers, from 0.859 (Lohse 1908), through to Strand's 0.881, to 0.89 (Soderhjelm 1999) and this has driven the computed A down (see eqn. above), but its most recent value remains some 10% higher that that implied by the best late-20th century measures in the 3rd CHARA catalogue. This suggests that a further revision in the e-value may yet be called for and it would only need an increase to e = 0.91 for Soderjelm's elements to fit the observed A perfectly. The interesting point here is that, quite independently, this is also precisely the change in the elements required to reduce the computed minimum separation; note, also, that quite small changes in e will give significantly different predictions when, as here, the eccentricity lies very close to 1.*

# THE STORY OF γ VIRGINIS 1836 AND 2005.

## 1836, THE BEDFORD OBSERVATIONS (ADMIRAL SMYTH, 'CYCLE OF CELESTIAL OBJECTS' 1844):

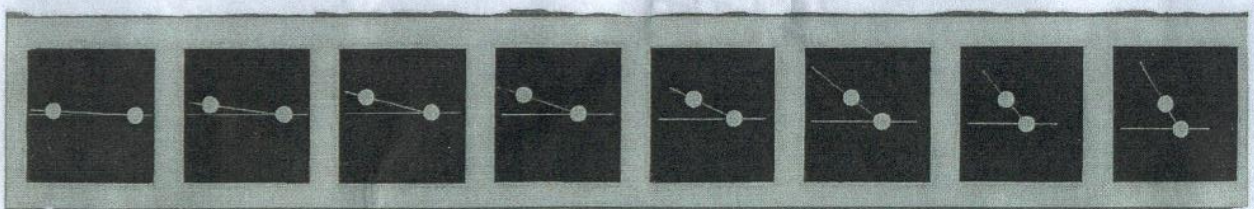



ALL WITH 5·9 INCH O.G., POWERS 240 – 1200.
APPARENT PERIASTRON PASSAGE = 1836·13 i.e. MID FEBRUARY 1836 ± 3 OR 4 WEEKS.

## 2005, THE HANWELL OBSERVATIONS:

ALL WITH 12½ INCH SPEC., X 238, X 300 & X 825, THE p.a.'s BY MEASUREMENT, SEPARATIONS BY ESTIMATION OF DIAMETERS.

| MAY 1998 (1998·38) | JUNE 1999 (1999·46) | JUNE 2000 (2000·44) | MAY/JUNE 2001 (2001·41) | MAY/JUNE 2002 (2002·41) | MAY/JUNE 2003 (2003·41) | MID-DECEMBER 2003 (2003·96) | LATE APRIL 2004 (2004·31) |
|---|---|---|---|---|---|---|---|



STARS ARE SHOWN THE SIZE AT WHICH THEIR AIRY DISKS APPEAR AT X 825 IN GOOD SEEING (0·31 ARCSEC).


PROJECTED APPARENT PERIASTRON: ABOUT 15th MAY 2005 ± 3 OR 4 WEEKS (i.e. 2005·37)

P.C.T. OCT. 2004

13

[iii] *And, indeed, the admittedly rough measure of 27th December last already puts the pair too far ahead in the orbit to fit in with the trend of the 1836 measures, at a level of discordance verging on that beyond anything attributable to the errors of observation, ancient or modern. In any case, we are too into virgin territory here (no pun intended) – this section of the orbit has never been measured before!*

## OCCULTATIONS DURING APRIL

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

| D R | Date & Time (UT) | | Lunar Phase | Sun Alt (°) | Star Alt (°) | Star | Mag |
|---|---|---|---|---|---|---|---|
| D | 12 Apr | 19:27 | 0.16+ | -7 | 34 | ZC 683 | 7.4 |
| D | 12 Apr | 21:53 | 0.17+ | -24 | 13 | ZC 698 | 7.5 |
| D | 15 Apr | 20:57 | 0.43+ | -17 | 45 | ZC 1108 | 7.0 |
| D | 16 Apr | 01:09 | 0.44+ | -26 | 9 | ZC 1131 | 7.3 |
| D | 16 Apr | 19:35 | 0.52+ | -7 | 60 | Hip 39941 | 7.3 |
| D | 17 Apr | 00:42 | 0.54+ | -27 | 18 | Hip 40756 | 7.2 |
| D | 17 Apr | 01:21 | 0.54+ | -25 | 12 | 19 Cnc | 5.9 |
| D | 19 Apr | 01:29 | 0.72+ | -24 | 18 | ZC 1462 | 7.3 |
| D | 20 Apr | 20:44 | 0.87+ | -14 | 44 | ZC 1645 | 6.7 |
| D | 20 Apr | 21:44 | 0.87+ | -20 | 44 | ZC 1648 | 6.9 |
| D | 23 Apr | 23:54 | 1.00+ | -25 | 25 | 86 Vir (double) | 5.5 |

James Appleton

# OASI PRESIDENTIAL LECTURE

**Friday 22nd April 8pm at Orwell Park School**

**Our Hon President, Professor Allan Chapman of Wadham College, Oxford will present his second Presidential Lecture to society members and guests On the subject of**

## *'THE GREAT LADIES OF ASTRONOMY'*

**Featuring Mary Sommerville, Caroline Herschel, Agnes Mary Clark, Margaret Huggins, Richarda Airy and others.**

**Wine and Cheese buffet to follow the lecture.**

☎ Ken Goward [redacted]

## OASI COMMITTEE CONTACTS & RESPONSIBILITIES

| | | | |
|---|---|---|---|
| Kenneth J Goward FRAS | **Chairman** | ☎ | Press Publicity with the Secretary.<br>Open Weekend. |
| Roy Gooding | **Secretary** | ☎ | **Main point of Society Contact.**<br>Press Publicity with the Chairman. Observatory Decoration.<br>Visits by potential new members. |
| Garry Coleman | **Treasurer** | ☎ | Finance.<br>Supervision of Grant Applications. |
| James Appleton | Committee | ☎ | Committee Meeting Minutes.<br>Web site. |
| Martin Cook | Committee | ☎ | Membership.<br>Tomline Refractor Maintenance. |
| Neil Morley | Committee | ☎ | Equipment Curator. |
| Ted Sampson | Committee | ☎ | Workshops.<br>Tomline Refractor tutoring. |
| Eric Sims | Committee | ☎ | Newsletter |
| Mike Whybray | Committee | ☎ | Librarian. |
| Paul Whiting FRAS | Committee | ☎ | Visits by outside groups. |
| Bill Barton FRAS | Committee | | Safety & Security |
| Peter Richards | Working under Committee direction but not Co-opted | | Lecture Meetings. |

## TEMPORARY CLOSURE OF THE DOME

**Would members note that the equatorial room will be closed on Friday 1st April from 09.00hrs to approx 18.00hrs, whilst engineers remove the Tomline Refractor and replace it with a 36" F9 Tasco Newtonian Reflector. The original mount will be retained and it is expected that the Observatory will be operational in time for the following Wednesday evening. We are grateful to Mr R Goss for sponsoring the new instrument.**

# DIARY FOR APRIL

| | |
|---|---|
| **MONDAY** | **SMALL TELESCOPES OBSERVING NIGHTS**<br>4th Leo<br>18th Coma Berenice's (deep sky objects)<br>☎ Paddy O'Sullivan |
| **WEDNESDAY** | **OBSERVATORY CLUB NIGHTS**<br>6th 13th 20th 27th<br>☎ Martin Cook |
| **WEDNESDAY**<br>**6th**<br>**Science**<br>**Classroom** | **ASTRONOMY WORKSHOP**<br>**From 7.45pm**<br>***'Planetary Atmospheres'***<br>Presented by Dave McCracken<br>☎ Ted Sampson |
| **THURSDAY** | **OBSERVATORY VISITS BY OUTSIDE GROUPS**<br>**7th from 8pm** – University of the Third Age<br>☎ Paul Whiting FRAS |
| **FRIDAY**<br>**22nd**<br>**8pm**<br>**Orwell Park**<br>**School**<br>**Main Hall** | **OASI PRESIDENTIAL LECTURE**<br>***'THE GREAT LADIES OF ASTRONOMY'***<br>**By Professor Allan Chapman**<br>Followed by a wine & sandwich buffet<br>ALL MEMBERS ARE INVITED TO ATTEND<br>☎ Ken Goward FRAS |
| **SATURDAY**<br>**16th** | **OASI COMMITTEE MEETING**<br>From 8pm<br>Classroom at base of the Observatory tower<br>**ALL MEMBERS ARE WELCOME TO ATTEND**<br>☎ Ken Goward FRAS |

## SOCIETY PRIMARY CONTACTS

**CHAIRMAN** Kenneth J Goward FRAS ☎ (daytime & evenings)
**SECRETARY** Roy Gooding ☎ (daytime) (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