

Janus

Ewell Astronomical Society Newsletter – Spring 2009

Serving skywatchers in SW London and north Surrey

Ewell AS homepage www.ewell-as.co.uk



Ewell Astro Soc c/o David Fishwick, Nonsuch HS for Girls, Ewell Road, Cheam, Surrey SM3 8AB

YOUR NEW COMMITTEE for 2009 elected at AGM on 2008 Dec 12 – contact them with any queries.

Chairman: David Cooper: 01737 351184 Deputy Chairman/Speakers Organiser: David Fishwick

Secretary: Anita King: 01372 722097 Treasurer: Valerie May

Other elected committee members: Louis Barman [Librarian]; Mike Wright [Registrar], Richard Gledhill

Janus Editor + Webmaster: Maurice Gavin mgavin@ntlworld.com Janus deadline Jan/Mar/May/ Sep/Nov main meeting

JANUS-ON-LINE-IN-COLOUR: For a full colour version of any recent Janus log-on to www.ewell-as.co.uk / Janus / Janus pdf file. Cut + paste web addresses [URLs] therein direct to your Internet Browser and save typing errors!

MEMBERS EMAIL LIST: email mgavin@ntlworld.com to receive rapid news of astro events or programme changes.

EAS Meeting dates for your 2009 diary – see www.ewell-as.co.uk

All held at Nonsuch HS for Girls-Ewell Road - Cheam [unless noted] and start at 8pm.

Ordinary Monthly Meetings [in bold] in Common Room start at 7.40pm.

Headley Heath meetings *phone 01252 382940 from 7pm on evening to check observing is 'on'.

Moon's phase at Users' Group meeting shown [>Q3] = after 3rd quarter [<Q1]= earlier than 1st quarter = crescent moon.

Door subscriptions £1 and £3 for visitors - Arriving at meetings with small change in your pocket and not tendering £10 and £20 notes is greatly appreciated.

Wed Apr 15 @ 8pm – Users Group Meeting – NSHS Observatory Deck [>Q1]

Fri Apr 17 – Dr Ian Kenyon - *Challenges for the Large Hadron Collider*

Mon-Thu Apr 20-23 @ 8pm Observing Session Headley Heath* **view Mercury**

Fri May 8 – Dr Emily Hall - *Interaction between Solar Wind & Outer Planets*

Mon-Thu May 18-21 @ 9pm Observing Session Headley Heath*

Fri Jun 12 - Bob Mizon - *Fourteen Pioneers of Astronomy*

Wed Jun 17 @ 8pm – Users Group Meeting – NSHS Observatory Deck [>Q3]

Sat June 27 all day EAS at BAA Exhibition Meet – Greenwich Naval College

Fri Jul 10 – Dr Mike Leggett - *Astronomy in the Medieval World*

Fri/Sat Jul 17/18 – EAS visit to Jodrell Bank –see Chairman's msg below

August – no main meeting

Wed Aug 19 @ 8pm–Users Gp Meeting – NSHS Observatory Deck [new moon]

Fri Sept 11 – John Bance - *Exoplanets*

Sat Sep 12 – Ewell AS Headley Heath Picnic & Star-Party

Mon-Thu Sep 21-24 @ 8.30pm Observing Session Headley Heath*

Fri Oct 9 – Alan Drummond - *Andromeda Galaxy*

Mon-Thu Oct 19-22 @ 8pm Observing Session Headley Heath*

Wed Oct 21 @ 8pm – Users Group Meeting – NSHS Observatory Deck [<Q1]

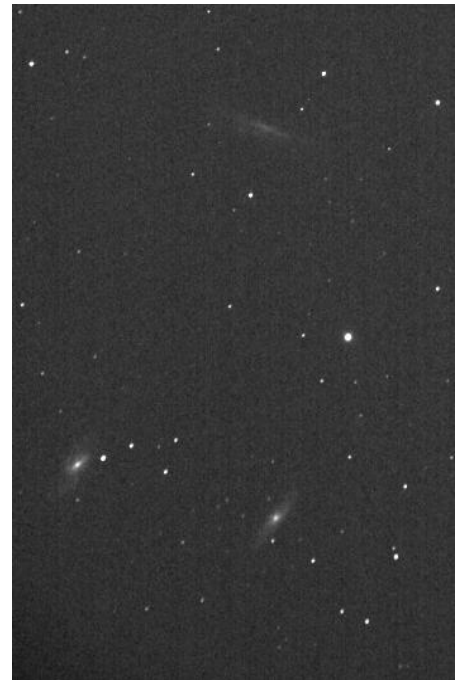
Fri Nov 13 - Jack Martin – *Astronomical Stellar Spectroscopy*

Mon-Thu Nov 16-19 @ 8pm Observing Session Headley Heath*

Fri Dec 11 – AGM + talks TBA

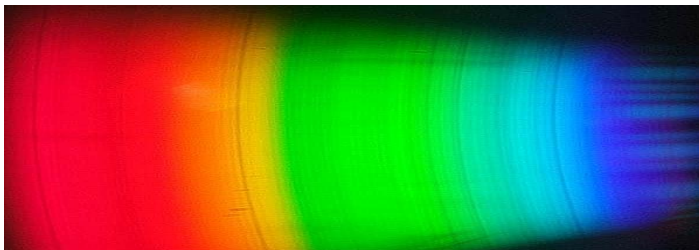
Mon-Thu Dec 14 -17 @ 8pm Observing Session Headley Heath*

Wed Dec 16 @ 8pm –Users Group Meeting– NSHS Observatory Deck [new moon] *The Leo Trio* by James Gordon: see report



SUN'S SPECTRUM 'SEEN' IN A DVD DISK - Everyone has enjoyed the brilliant colours seen in a CD or DVD disk

but few realise that the sun's spectrum, complete with dark 'lines', can be seen in the disk brought very close to the eye with sunlight skimming over the disk at a very low angle – give it a try and let us know how you got on! See my video <http://www.youtube.com/watch?v=w0h6r1Itmnc> M.Gavin



THE USERS GROUP MEETING is held on Wednesdays from 8pm sharp on alternate months on dates noted on the EAS Diary in the School's Geography Room via Main School Entrance facing playing field -map www.ewell-as.co.uk

OBSERVING SESSIONS ON HEADLEY HEATH will be held monthly [Sept to May] on dates noted on the EAS Diary at the 'dark of the moon' at NT carpark adj cricket pitch. Phone 01252 382940 from 7pm to check meeting is on. **Note** – if Headley Heath OS clash with the Users Gp meeting at NSHS [Feb/Oct/Dec] then observing held at NSHS.

EWELL AS SUBSCRIPTIONS The Society annual subscriptions are due in January. Please forward your sub [member £15; family £18; junior £5 made payable to Ewell Astro Soc] to...
EAS Treasurer - Valerie May, 41 The Green, Burgh Heath, Tadworth, Surrey KT205NP; phone: 01737361486

EWELL AS PLANS FOR INTERNATIONAL YEAR OF ASTRONOMY 2009 (IYA) – by David Cooper
As you are aware this year has been designated the IYA and Societies everywhere will be busy planning to mark this year with various events. At our December Committee meeting we discussed briefly and came up with a few ideas, some of which I am including here. The purpose of this article is to give you a foretaste of what to possibly expect, although I emphasise at this early stage there is much to organise. Please watch this space, the Website, read Janus and listen out at future meetings for further announcements on our plans, as they develop.

Sutton shopping centre: to organise a society display there.

Library talks at possibly three venues, as requested of us by Carshalton Library Manager to take place in the Autumn 2009 with possible talk/display about the 40th anniversary of the Lunar landings amongst other astronomical topics.

National Trust event, possibly in 2009/10 - are interested in a viewing evening at Polesden Lacey with Ewell AS.

A social evening along the lines of the 40th Anniversary Event to be held at a large venue including a meal.

Society visits by mini-bus for limited numbers but to be cost effective members will need to pay a deposit.

More public participation at viewing sessions whether at Headley Heath or NSHS roof-top observatory.

More details will follow when known and arranged. Please be aware that we would love to add a **Visits Organiser** to our Committee. Any members, wishing to participate in the organisation of these events is most welcome.

JODRELL BANK VISIT: I am working on putting the Jodrell Bank visit to July 2009, following the EAS visit on 27th June to Greenwich BAA Exhibition. It would appear to involve an overnight Friday 17th to Sat 18th July with a series of lectures and workshops connected with Astronomy & Archaeology. We propose to organise a mini-bus with limited spaces and a deposit will be required. Please contact me if you would like to visit Jodrell Bank, as outlined above, so we may judge interest – this is essential.

We will confirm more details soon when we have them for the next Janus/Website as you decide. I am confident we can secure these two visits for the EAS. We will keep you advised on other IYA arrangements when more details are known. David Cooper – Chairman Feb 19 2009

MEMBERS OBSERVATIONS

Impromptu Nonsuch Observing Deck Session – Feb 13 : due to an unfortunate mix-up with speakers for our February Main Meeting - the meeting was split between watching a DVD movie *In the Shadow of the Moon - Apollo Landing 40 years-on* and observing from the rooftop observing deck. About a third of members [some 15 or so] chose the roof and donned overcoats to trek to the roof on a clear cold evening. Jeff Heywood had his new green laser-pen to 'play across the sky' with a beam that seemed to touch the stars – the location of brighter stars was pointed out with ease and even the general position of the Lynx quasar - midway between the Plough *Pointers* and Castor and Pollux *Twins*. The quasar's light takes 12 billion years to reach earth but was too faint to see without a telescope!

David Fishwick had opened the observatory and trained the school's 11-inch Celestron SCT on **Venus** low in the west. The crescent phase was clearly visible at the eyepiece and later planet **Saturn** in the east with ring system near edge-on. Satellite Titan was clearly seen to one side of Saturn. The **Great Orion Nebula** [M42] within the *Sword of Orion* was also viewed through the telescope in somewhat hazy conditions.

After nearly an hour of astro-chat and discussion the members drifted back inside to warm themselves with a hot coffee and watch the remainder of the movie. Success in the face of adversity!

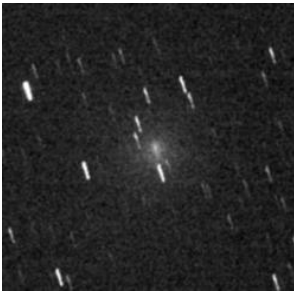
COMET LULIN Feb 14: Gary Walker reports: On the morning following our February meeting I was looking for **Comet Lulin** but could not see it (admittedly the moon was still very bright) when about 2.10AM I saw a bright **meteor/fireball**, shooting downwards low in the SE sky, below the waning gibbous moon and Leo - it's position was

probably in the region of Corvus and Crater and moved NW-SE at a steep angle, and was slow enough to last several seconds. The meteor was a bright green, with perhaps other colours, and had sparks flying off it

Feb 16 at 2AM: Maurice Gavin reports: I spied **Comet Lulin** through binoculars from my backgarden as a largish but faint *fuzzball* immediately above bright bluish star Spica. By chance a bright **slow moving meteor** was seen immediately below Spica with a similar trajectory as Gary's fireball of two days ago!

Feb 28 David Cooper emails: I saw **Comet Lulin** through 10x50 bins as a faint smudge approx 5 degrees east of **Regulus** in Leo. - sky limit magnitude +4.5. Also saw **Moon/ Venus conjunction** about 1900hrs local time at 5 degrees separation on Feb 27th. I saw the comet again on 1st March through 10x50 bins

Ron Johnson emails: Observed **the comet** for the first time last night. Its movement is very obvious after only an hour.



James Gordon emails: Here's a deep sky taster taken on **Jan 23/24** from Ashdown forest of the **Leo Trio** – see front cover. Usual setup -Canon 400D DSLR plus 80ED refractor on CG-mount for 162 seconds at 1600ISO [noise reduction on]. Some cropping and adjustments made.

[left] **Comet Kushida** well placed near the Hyades cluster in Taurus at the time.

I am attaching two images taken last night with the Canon 400D. I had a surprisingly good session as I have not done any astro in the back garden for many months. **Comet Lulin** through the 80ED with an Orion light pollution filter. Iso 1600, 91 sec exp, tried to track manually with a cross hair eyepiece and Barlow. The comet was moving quickly in the eyepiece- hard to keep up!



[left] The second image is **Markarians Chain** in Virgo. I wanted to centre M86 but was unsure as I do it manually and there are so many smudges in that part of the sky! Again using the 80ED with a light pollution filter for 251s - noise reduction on.

I was up late (till 2am) and later some of the deep sky stuff looked reasonable visually as the conditions improved. I thought **Lulin** almost showed a tail

through the 10" but couldn't confirm this. Not like at Ashdown the other night with Clive where it was definite even in binoculars. There was a very bright nucleus and large coma [right]

Galaxies looked good including **NGC4565** in Coma and **3184**, just visible in the ED80. I was pleased with the set up for image guiding and feel with practice ,I will improve this technique, although it is highly labour intensive.

Gary Walker further emails: I had two nights of really good looks at **Comet Lulin** on February 27th and 28th. In binoculars, it appeared as a fairly large, but dim, fuzzy ball. However in my 8" SCT, the comet appeared much smaller as a small fuzzy patch with a more condensed centre. This effect was probably because the coma has a low surface brightness, and thus it shows up larger in binoculars than in a telescope! However the comet was bright enough to observe at x222 but no more change could be seen.



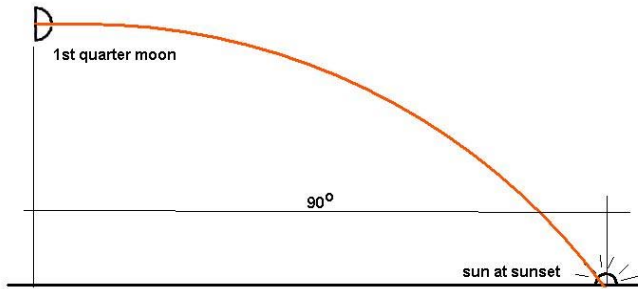
All above images by James Gordon.

What is more interesting is the speed at which it is moving - it had moved about 5 degrees in 24 hours. On the night of February 28th-March 1st, I observed the comet, on and off, over a period of 4 hours. In that time it had moved across the

width of the field of view of my 32mm eyepiece (62X), a distance of about half a degree, or so!. It was possible to see that the comet had moved even over periods as short as 20-30 minutes! I did sketches at regular intervals (luckily the comet was passing close to some reasonably bright stars seen in 8" SCT. I saw no colour or sign of a tail.

<< *Comet Lulin Feb 28 Meade ETX-70 @ f/3.5; 4m exp Maurice Gavin @ WPO*





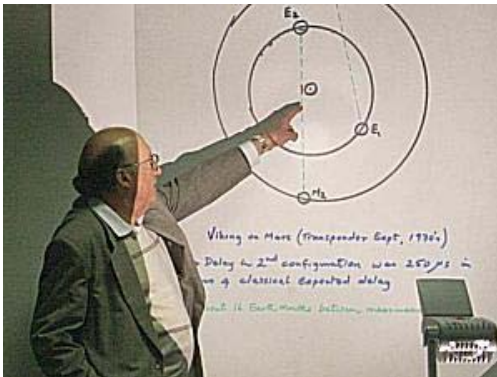
THE MOON SAGA – continued David Fishwick’s Sky at Night presentation last autumn raised the anomalous appearance of the first quarter moon at sundown and many members at the meeting expressed dissatisfaction with virtually all explanations! Louis Barman in his Sky at Night presentation on March 13th last gave an alternative explanation related to perspective of the two bodies separated by 90 degrees. Arthur Wyatt emails: Following the explanation of the phase of the Moon last Friday I have looked again at the explanation. The fence post edge in the picture by the Thames is a vertical line – all vertical lines will

always appear vertical. Also we were not considering a sphere! This is not an explanation no matter how convincing it was at the time!

The solution lies in the fact that the Moon is 400 times as near than the Sun. If we draw a triangle representing the Moon Sun and Earth it is a very thin triangle indeed. When the Sun and Moon are exactly at right angles from our point of view the angle Earth – Moon- Sun is $\text{Cos}^{-1} 1/400$ which is 89.857 degrees or to all intense and purposes 90 degrees.

We therefore see illumination on half the moon almost exactly for the surface in our view. Put it another way; the corresponding verticals where the Sun is directly overhead on the Earth and the Moon are within 0.25 degrees of being parallel to each other. and this determines the exact centre or the illuminated portions of both bodies. In such a case (even with wobble by the Moon from the ecliptic - which does not come into it!) the Sun and Moon are virtually 90 degrees apart in the sky wherever they are in the Zodiac and curves around the ecliptic don’t come into the consideration either. Yes distortion of the projection of the inside of a sphere by a fisheye lens does affect our perception. Editor’s note: this subject is now closed!

NEW ASTRO-SOUTH E-MAGAZINE available online at <http://www.hantsastro.org/astrosouth.html>



RELATIVITY FOR NON-MATHEMATICIANS - Society talk by Konrad Mallin-Smith of Croydon AS - March 13th

Konrad has been a regular and popular visitor to Ewell down the years and gave an enlightening talk on a relatively tricky subject. Like plants without water Einstein without mathematics would be difficult, if not impossible, and some maths was inevitable!

Konrad’s excellent view-graphs got the concepts across and you can read his full account in his booklet *Altair – Experiments in Relativity* deposited in the society library. Note+pics by Editor.



PLANET VENUS on 2009 March 16 at dusk – the rainbow colours caused by of the earth’s atmospheric dispersion acting like a glass prism.
 << Venus - 30cm SCT + camera afocal to eyepiece. M.Gavin

ASTEROID NEILBONE [MP#7102] = 1936NB –BAA Meteor Section Director and past speaker at Ewell has been honoured by having a low-numbered asteroid named after him for his work in amateur astronomy. The asteroid was discovered in 1936 by Dr Cyril Jackson at Union Observatory Johannesburg RSA. After his retirement Dr Jackson, a Yorkshire born professional astronomer, gave a talk about his work in South Africa to the society in its early days. Editor.

ASTRO-VIDEOS ON-LINE - checkout www.astroman.fsnet.co.uk/myvids.htm to view some short YouTube videos on London Astrofest, new Meade ETX-LS, current sun, moon, Venus at inferior conjunction, Comet Lulin etc. Editor

