

Janus



Ewell Astronomical Society Newsletter – Summer 2007

Serving skywatchers in SW London and north Surrey

www.ewell-as.co.uk

Ewell Astro Soc c/o David Fishwick, Nonsuch HS for Girls, Ewell Road, Cheam, Surrey SM3 8AB
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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] direct to your Internet Browser and save typing errors!

VENUS OBSERVED – one of the glorious sights this spring has been the evening star Venus hanging majestically in the western sky each dusk that many members and lay observers commented upon. It was especially prominent in April during a long run of clear skies and summer temperature into the 70's F and many pictures were taken to capture the event. Here is a montage from Users Group meeting on the school's Observing Deck on April 18 with 15 members and visitors in attendance.



[above] Maurice Gavin from Worcester Park via 12" Meade SCT+eyepiece+Fuji E550
[right] Albert Greenfield from Nonsuch HS Observatory Deck via 11" Celestron SCT.

Ewell AS Meetings

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

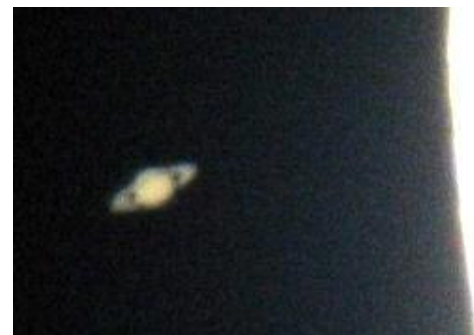
Ordinary Monthly Meetings [in bold] in Common Room start at 7.40pm.

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

Door subs – arriving at meetings with small change in your pocket and not tendering £10 and £20 notes is greatly appreciated

Meeting fee per lapsed Member or visitor is £3 per evening.

Saturn's reappearance from behind Moon on 2007 May 22



Janus contributions – can you help? If you have any astro observations, pictures, articles or notes please email it to mgavin@ntlworld.com or hand it to Maurice Gavin on a floppy disk or CD. Thanks.

Too much talk about cameras in this issue? You could change that by submitting an article !

EAS Meeting dates for your 2007 diary – see www.ewell-as.co.uk

Fri Jun 8 - Dr Stuart Eves - Surrey Sat Tech Ltd - *Sophisticated Small Satellites from Surrey*

Wed Jun 20 – Users Group Meeting – NSHS Observatory Deck

Fri Jul 13 Roger Dymock – BAA- *Asteroids*

August – no main meeting

Wed Aug 15 – Users Group Meeting – NSHS Observatory Deck

Mon-Thu Sep 10-13 Observing Session Headley Heath*

Fri Sept 14 – Nick James – BAA – *Robotic Telescopes*

Mon-Thu Oct 8-11 Observing Session Headley Heath*

Fri Oct 12 - Dr Michael Merrifield – Nottingham Uni –

Our Galactic Centre, Black Holes, Rare Stars+Cosmic Mayhem.

Wed Oct 17 – Users Group Meeting – NSHS Observatory Deck

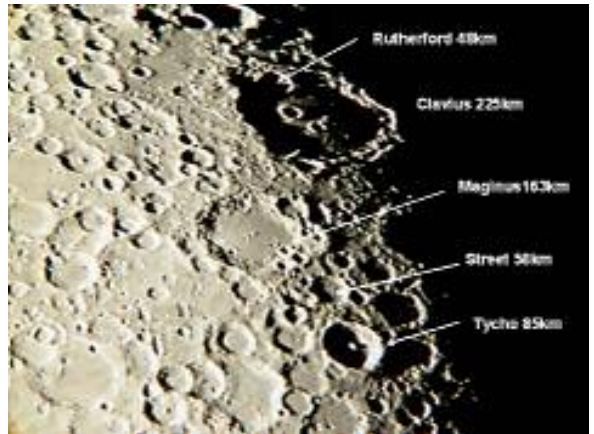
Fri Nov 9 – Dr Stewart Moore – BAA – *The Deep Sky*

Mon-Thu Nov 12-15 Observing Session Headley Heath*

Mon-Thu Dec 10-13 Observing Session Headley Heath*

Fri Dec 14 – AGM+ talk TBA [Lunar image by Ron Johnson](#) >

Wed Dec 19 – Users Group Meeting – NSHS Observatory Deck



Observing Sessions on Headley Heath will be held monthly [Sept to May] on dates noted on the EAS Diary at NT carpark adjacent the cricket pitch. Phone 01252 382940 from 7pm to check meeting is on.

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.

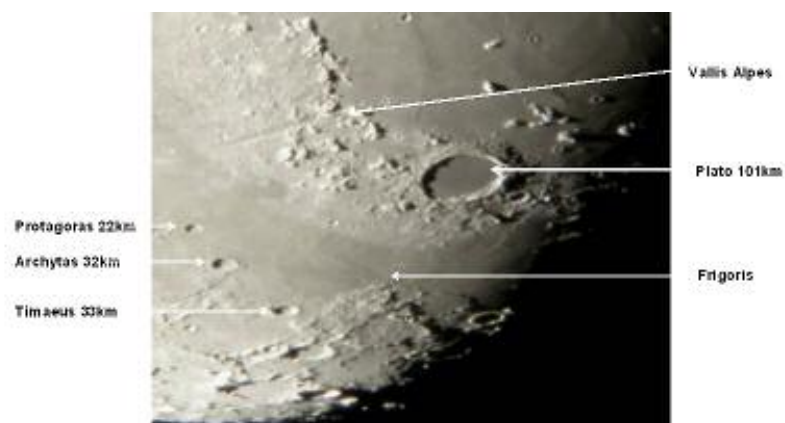
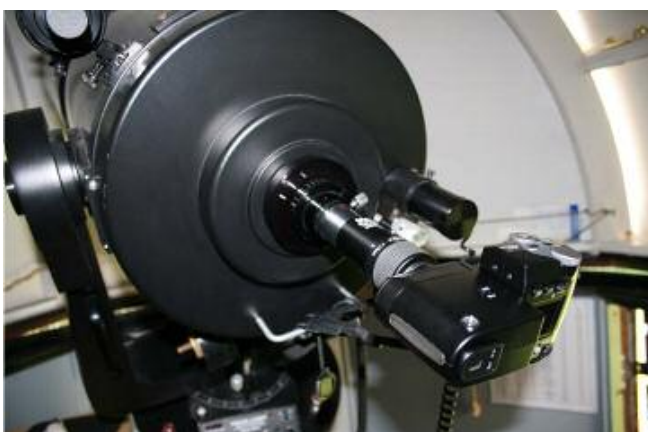
Overdue Ewell AS subscriptions: The Society annual subscriptions are due on January 1st. If still unpaid please could you forward your sub [member £15; family £18; junior £5] to our Treasurer - Valerie May, 41 The Green, Burgh Heath, Tadworth, Surrey KT205NP; phone: 01737361486

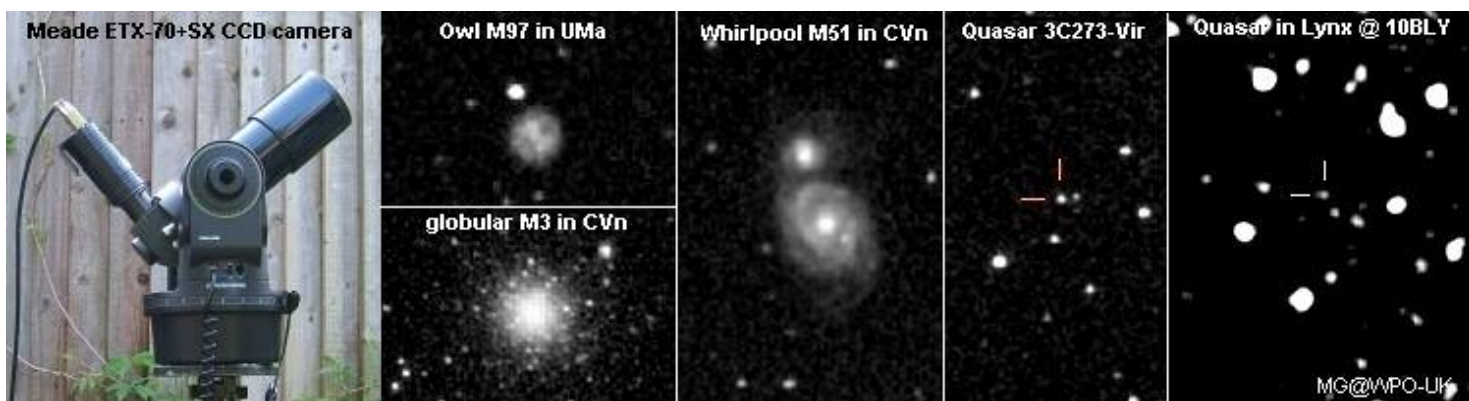
IMAGING THE MOON WITH A DIGITAL CAMERA by Ron Johnson - Ewell Court Observatory

As amateur astronomers we tend to strive to observe as much detail as possible on the distant planets of our solar system and to some extent ignore the closest body to the Earth, the Moon. If you take time to observe the various features and formations on the surface of the Moon it can be a fascinating and rewarding experience. Just looking at the shadows can give a clue to the shapes and heights of features, particularly craters and mountains etc. If you want to go one step further and record these features then one way of doing it is to use a standard digital camera. I have been trying this out during recent weeks. The method that I use is described thus: First you need to decide what image scale you want. Do you want to include individual craters or larger areas of the Moon in your image? The more magnified image scale you choose then seeing conditions (the steadiness or otherwise of the Earth's atmosphere) will become more of a controlling factor in acquiring sharp images. Virtually any digital camera that can be coupled to the eyepiece will serve - I use a x2 Barlow lens with an 18mm focal length eyepiece and Nikon Coolpix digital camera attached to the telescope [left].

This covers a reasonable area of the Moon in one image and will tolerate moderate seeing. I first focus the Moon in the telescope by eye. I then attach the digital camera to the eyepiece. The camera is set to automatic for exposure and shutter speed. Once I have framed the required area of the Moon I then press the shutter release button on the camera. Using the ten second delayed action allows the camera and telescope to settle down before the camera shutter opens.

I normally take two or three images of the same area of the Moon hoping to catch a good moment of seeing. The features on the Moon can look quite different under differing illumination from night to night. So a series of images taken over several consecutive nights can record the terminator progressing across the Moon and the changing views of many of the features. The next time you see the Moon in the sky why not have a go at taking some images - you will be surprised how easy it is.





SMALL IS BEAUTIFUL – at star parties the longest queue forms behind the largest telescope for the simple reason large telescopes collect more light – essential for our impoverished eyesight on faint objects. But viewing secondhand via a digital camera is much more forgiving to reveal stars maybe x100 fainter than can be viewed through the same small telescope. By small I mean 70mm f/5 refractor some 350mm [14”] long aided by Meade’s Autostar goto system with a viewing list to keep even the most dedicated observer content for years.

It includes everything from solar system planets out to blackhole candidates and quasars on the edge of the universe. I chuckled at these latter objects for even Autostar states they remain invisible except from mountaintop observatories. But one object - quasar 3C273 in Virgo at mag 12.8 - caught my eye – was it within range of this small scope – yes easily it seems in 120s exposure as here. I even captured a mag 15 quasar in Lynx at 10 BLY range! More sample images of galaxies, star clusters etc via this small Meade ETX-70 telescope can be found on my homepage at <http://www.astroman.fsnet.co.uk/etx70mg.htm> M.Gavin @ WPO

LUNAR OCCULTATION OF SATURN & REGULUS 2007 MAY 22/23

As announced at the March 2007 meeting by Chairman David Cooper with an accompanying handout, a viewing would be held on the Nonsuch School Observing Deck for the Saturn occultation on May 22 in twilight - weather permitting. Conditions proved perfect and 8 members hosted by David Fishwick witnessed this rare event through four telescopes.

Ron Johnson reports: I managed to pick up Saturn in the telescope at 18.40UT from Ewell Court Observatory. I was amazed that I could see the planet in daylight. There was not a great deal of contrast but the globe and rings were visible.

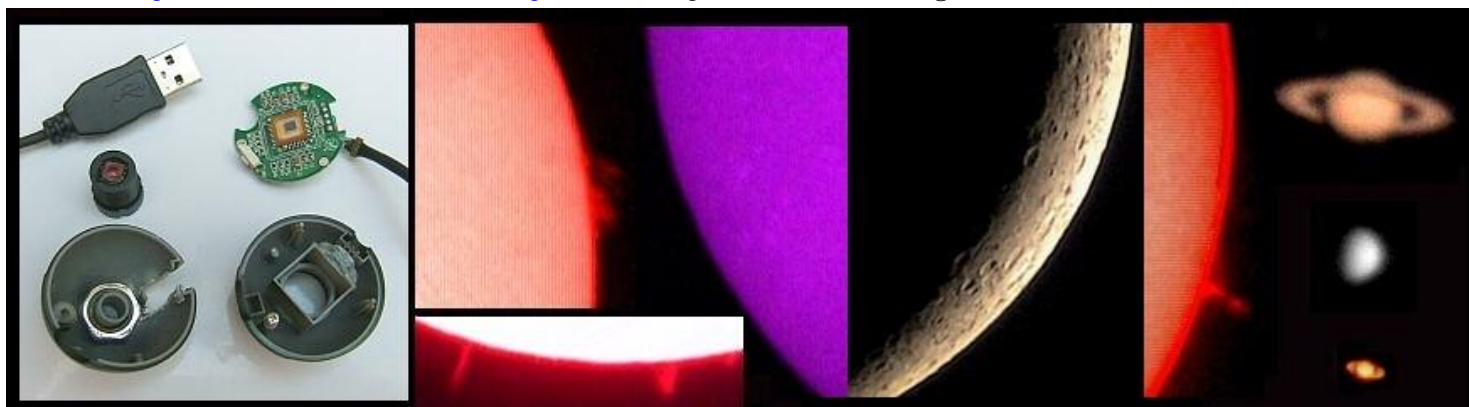
I took some images of the disappearance via my Nikon Coolpix 4500 digital camera attached to the 300mm SCT + Barlow and 18mm eyepiece - thinking that there would be little chance of a good image but they proved surprisingly good. Unfortunately I missed the reappearance as the camera field of view only covered part of the lunar limb. I wasn't quite sure where Saturn would reappear but got some images as the moon moved away from Saturn.

Gary Walker reports: I observed both these events from my home at Banstead, under perfect conditions through my 8" SCT and 60mm refractor. I first spied Saturn at 7.14pm, nearly an hour before the event. Saturn appeared very pale but clear enough. The disappearance at 8.10pm took about 46 seconds for Saturn to be covered and it was strange to see Saturn apparently disappearing into nothing some way off from the illuminated crescent moon itself. Saturn's reappearance from behind the bright limb at 9.17pm seemed to take 83 seconds to be uncovered by the moon.

REGULUS OCCULTATION – on May 23 less than 24 hours after the Saturn event Regulus [alpha Leonis] was occulted by the moon in the mid-afternoon but seen as a 'graze' from southern England/Epsom area.

Gary Walker reports: I saw the star Regulus appear as a tiny white sparkling speck of light, extremely close to the moon's southern limb from ~4.01pm BST to 5.05pm – so close that both bodies were easily visible in the same field of view even with a magnification of x333 and I managed to follow them throughout the evening until it became dark! Of course this star was harder to pick out than was Saturn because Saturn is an extended object.

FRUGAL WEBCAM FOR ASTRO IMAGING – one can spend a fortune on cameras for attaching to a telescope but none are more frugal than the PCL-100K webcam from PCWorld at £7.99! It comes complete with USB plug and CD software to pop into your PC or laptop. Normally attached to a home computer for sending pictures to friend & family over the Internet – it takes just a few minutes to adapt for telescope use. My homepage <http://www.astroman.fsnet.co.uk/cheapweb2.htm> explains how. M.Gavin @ WPO



THE OUTER PLANETS THIS SUMMER

Soon planet Saturn will be running to bright twilight in the western sky so grab this time for a last look for awhile. Brilliant Venus is close to Saturn about July 1st as a useful marker. Earlier on the evenings of June 18 and 19th the crescent moon joins the duo for a nice photo opportunity.

Low and skimming the southern horizon is giant and unmistakable planet Jupiter with its four attendant moons visible in binoculars. A little to the west [right] of Jupiter in minor planet Vesta – reputedly visible to the naked eye if you know precisely where to look. Remote Uranus and Neptune, both binocular objects, rise in the early hours in late summer in Aquarius and Capricornus respectively. Former planet Pluto continues its lonely journey in the Sagittarius starfields ‘above’ Jupiter. Although easily recorded via a small telescope, a large telescope is needed to see Pluto’s feeble mag 14 light. Happy summer planet spotting!

SOME USEFUL URLS - you may find these websites of value – do you have some favourite sites to share?

<http://www.multimap.com/> find the UK map with latitude and longitude from the post code.

<http://oiswww.eumetsat.org/SDDI/cgi/listImages.pl?m=bnw> current european cloudcover for planning your viewing.

<http://spaceweather.com/> latest news on meteors, the sun, aurora, NEA and much more.

<http://www.skyandtelescope.com/observing/skychart/> interactive star-charts for any location and time.

Help publicize your Society by placing this poster in your local library, school, shop or station for free.

-----cut line-----a four version can be downloaded from www.ewell-as.co.uk/Janus.pdf file ---- cut line -----

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commencing at 19.45 hours

mg15ax67