

THE LUNAR OBSERVER

RECENT BACK ISSUES: http://moon.scopesandscapes.com/tlo_back.html

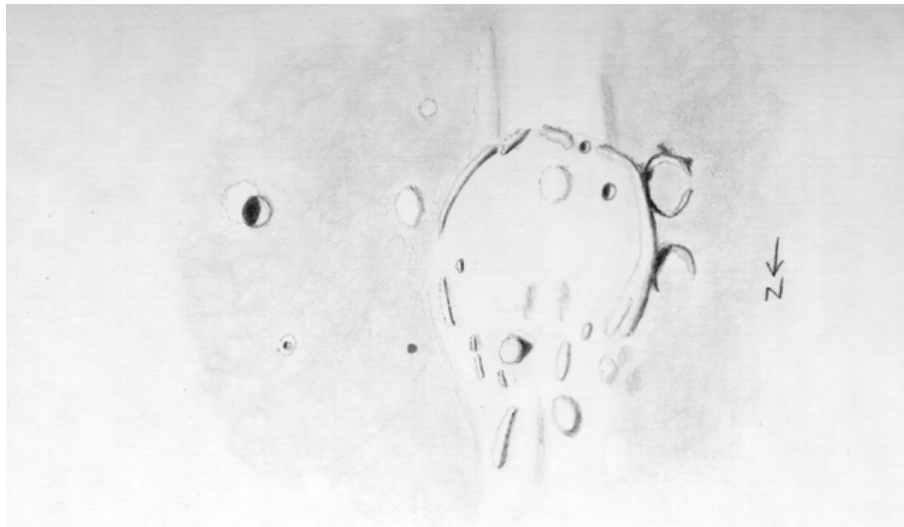
A PUBLICATION OF THE LUNAR SECTION OF THE A.L.P.O.

EDITED BY: Wayne Bailey wayne.bailey@alpo-astronomy.org

17 Autumn Lane, Sewell, NJ 08080

FEATURE OF THE MONTH – APRIL 2009

GUERICKE



Sketch and text by Robert H. Hays, Jr. - Worth, Illinois, USA

January 6, 2009 1:30-2:00 UT

15 cm refl, 170x, seeing 7-8

I sketched this crater on the evening of Jan. 5/6, 2009 before the moon hid 6th-magn. ZC 311. This crater is in a relatively bright area north of Mare Nubium and east of Mare Cognitum. It is a ruined crater with an intact west rim, a broken south and east rim and no north rim to speak of. Guericke D is the conspicuous pit inside the west rim, and Guericke H is the smaller crater embedded in Guericke's south rim. A round domelike feature is near these two craters. Guericke F is the broken ring outside the main crater's west rim near Guericke D, and another ruined ring is north of F. These two features abut the rim of Guericke, but not each other. Their floors are also darker than that of Guericke. The open north end of Guericke is filled with an assortment of elevations and shadows that I drew as I saw them. Guericke alpha is the round peak with a pointed shadow. Guericke kappa is the narrow ridge north of alpha, and Guericke lambda is west of

kappa. Other features in this area may be parts of old rings shown on the Lunar Quadrant map. Guericke C is the sizable crater east of Guericke, and Guericke E is the small pit north of C. There is a modest halo around E and a bright area along the southeast side of C. A low, bright mound is near the largest segment of Guericke's southeast rim, and a bright, shadowless patch is farther south. These last two features are near a low, bright ridge extending southward from Guericke. The terrain is darker to the east and west of Guericke than to the north and south. This duskiness goes up to the west rim of Guericke, but does not reach the fragmented east rim.

AN INVITATION TO JOIN THE A.L.P.O.

The Lunar Observer is a publication of the Association of Lunar and Planetary Observers that is available for access and participation by non-members free of charge, but there is more to the A.L.P.O. than a monthly lunar newsletter. If you are a non-member you are invited to join our organization for its many other advantages.

We have sections devoted to the observation of all types of bodies found in our solar system. Section coordinators collect and study members' observations, correspond with observers, encourage beginners, and contribute reports to our Journal at appropriate intervals.

Our quarterly journal, **The Strolling Astronomer**, contains the results of the many observing programs which we sponsor including the drawings and images produced by individual amateurs. Additional information about the A.L.P.O. and its Journal can be found on-line at: <http://www.alpo-astronomy.org/index.htm> I invite you to spend a few minutes browsing the Section Pages to learn more about the fine work being done by your fellow amateur astronomers.

To learn more about membership in the A.L.P.O. go to: <http://www.alpo-astronomy.org/main/member.html> which now also provides links so that you can enroll and pay your membership dues online.

LUNAR CALENDAR

APRIL-MAY 2009 (UT)

| | | |
|---------|-------|--|
| Apr. 02 | 02:32 | Moon at Perigee (370,013 km - 229,915 miles) |
| Apr. 02 | 14:33 | First Quarter |
| Apr. 07 | 02:00 | Moon 5.5 Degrees SSW of Saturn |
| Apr. 09 | 14:55 | Full Moon |
| Apr. 16 | 09:17 | Moon at Apogee (404,231 km - 251,178 miles) |
| Apr. 17 | 13:38 | Last Quarter |
| Apr. 19 | 15:00 | Moon 2.1 Degrees NNW of Jupiter |
| Apr. 19 | 22:00 | Moon 2.2 Degrees NNW of Neptune |
| Apr. 22 | 04:00 | Moon 4.6 Degrees NNW of Uranus |
| Apr. 22 | 14:00 | Moon 0.96 Degrees NNW of Venus |
| Apr. 22 | 14:00 | Moon 5.3 Degrees NNW of Mars |
| Apr. 25 | 03:23 | New Moon (Start of Lunation 1068) |
| Apr. 26 | 16:00 | Moon 1.9 Degrees N of Mercury |
| Apr. 28 | 06:28 | Moon at Perigee (366,041 km - 227,447 miles) |
| May 01 | 20:44 | First Quarter |
| May 04 | 06:00 | Moon 5.5 Degrees SSW of Saturn |
| May 09 | 04:01 | Full Moon |
| May 14 | 02:58 | Moon at Apogee (404,914 km - 251,602 miles) |
| May 17 | 05:00 | Moon 2.7 Degrees NNW of Jupiter |
| May 17 | 07:00 | Moon 2.4 Degrees NNW of Neptune |
| May 17 | 07:27 | Last Quarter |
| May 18 | 23:00 | Moon 1.9 Degrees SSE of asteroid Juno |
| May 19 | 16:00 | Moon 4.8 Degrees NNW of Uranus |
| May 21 | 03:00 | Moon 6.1 Degrees NNW of Venus |
| May 21 | 15:00 | Moon 6.0 Degrees NNW of Mars |
| May 23 | 22:00 | Moon 7.1 Degrees NNW of Mercury |
| May 24 | 12:11 | New Moon (Start of Lunation 1069) |
| May 26 | 03:45 | Moon at Perigee (361,154 km - 224,411 miles) |
| May 31 | 03:22 | First Quarter |
| May 31 | 12:00 | Moon 5.7 Degrees SSW of Saturn |

When submitting observations to the A.L.P.O. Lunar Section

In addition to information specifically related to the observing program being addressed, the following data should always be included:

- Name and location of observer
- Name of feature
- Date and time (UT) of observation
- Size and type of telescope used
- Orientation of image: (North/South - East/West)
- Seeing: 1 to 10 (1-Worst 10-Best)
- Transparency: 1 to 6
- Magnification (for sketches)
- Medium employed (for photos and electronic images)

CALL FOR OBSERVATIONS:
FOCUS ON: Triesnecker to Ariadaeus

Focus on is a bi-monthly series of articles which includes observations received for a specific feature or class of features. The subject for the **May 2009** edition will be the area from **Triesnecker to Ariadaeus**, including Rimae Triesnecker, Hyginus & Ariadaeus. Observations of all kinds (electronic or film based images, drawings, etc.) are welcomed and invited. Keep in mind that observations do not have to be recent ones, so search your files and/or add this fascinating area to your observing list and send your favorites to:

Wayne Bailey - wayne.bailey@alpo-astronomy.org

Deadline for inclusion in the Triesnecker-Ariadaeus article is April 20, 2009

FUTURE FOCUS ON ARTICLES:

In order to provide more lead time for potential contributors the following targets have been selected:

| | | |
|--------------------------|----------------------------------|----------------------------------|
| Mare Fecunditatis | TLO Issue: July 2009 | Deadline: June 20, 2009 |
| Deslandres | TLO Issue: September 2009 | Deadline: August 20, 2009 |

Editor's Note: Following a suggestion from Charles Galdies for a feature article on the various drawing techniques used by contributors, I sent a request for contributions to the observers who had contributed drawings within the last year or so. My original idea was to combine whatever information was submitted into a short article for this issue. The plan changed when the articles arrived. Instead of a single article, there will be a series of individual articles, continuing for at least three issues. I apologize to any drawing contributors who I may have overlooked. Additional articles are still welcome.

Since there is already an abundance of information available, I assume that a similar series on imaging techniques is not necessary. Would occasional hints, tips and tricks notes be worthwhile? More to the point, will anyone contribute notes? My contact information is in the masthead.

How to make freehand field cybersketches of lunar features on PDA

Peter Grego (St Dennis, Cornwall, UK)

For a number of years I've been using PDAs (PDA -- Personal Digital Assistant, a hand-held computer) and tablet PCs to make lunar observational field drawings. I find that these devices have many advantages over pencil sketching; the backlit screen is very useful, and the range of drawing tools in some drawing programs allows great versatility.

Here's an example of how I make a quick, freehand lunar field sketch made without a template. It's typical of the sort of lunar observation that might be made without too much effort, where it might be impractical to use a tablet PC, say when observing from a remote site on a camping trip, or observing through someone else's telescope. In this particular case it was a cold Christmas night following a family get-together – the Moon provided a source of visual entertainment more enthralling than any amount of festive television and more mentally stimulating than a dozen games of Trivial Pursuit.

Date: 26 December 2007

Time: 00:55 – 01:35 UT

Feature: Fraunhofer

Instrument: 127 mm MCT (Meade ETX-125) x200

Cybersketching device: SPV M2000 P/PC

Cybersketching programs: Mobile Atelier (field sketch) and Corel PhotoPaint (desktop enhancement using a graphics pad and mouse)

Fraunhofer, a 57 km diameter crater, lies near the Moon's southeastern limb. With the Moon a waning gibbous phase aged 16.3 days, the feature's illumination came from an evening Sun. Fraunhofer's western rim was casting an internal shadow but most of the details on the crater's floor remained visible, making a perfect subject for an observational drawing.

A small area including Fraunhofer and the craters Fraunhofer A and H was selected for the cybersketch – not too broad an area, presented fairly generously at a magnification of 200x, and one that was thought possible to depict sufficiently well within the space of 45 minutes.

1. Mobile Atelier was used to make the cybersketch – a good program for quick, fuss-free depictions. A portrait format and smooth white background was decided upon. Initial depictions of the outlines of the main topographic features were made using a narrow brush with a light grey colour, beginning with Fraunhofer itself and then adding the features in and around it. Small mistakes in delineation are not considered important at this stage, as they can be overdrawn later. The drawing was saved on the PDA's SD memory card.

2. Still using a narrow brush, the darker areas of shadow were outlined and filled in --this could also be achieved using a fill tool for more consistency of tone, but since the black areas were fairly small and the drawing was made on PDA, it was decided to stick with brush strokes. Switching colour to a light grey, the general tone of the landscape was depicted, leaving brighter areas like Fraunhofer's inner eastern wall and outer western flanks unshaded. Some albedo detail was added, like the dusky banding on Fraunhofer's inner wall. The drawing was saved.

3. Further tonal detail and shading was added, with some variations in the brush tone, and the drawing was saved.

4. Happy that the main features were adequately depicted, a blur effect was applied to the brush and a smoother consistency of tone in and around Fraunhofer was achieved without affecting the more sharply defined areas of shadow. The final PDA image was saved as a BMP file titled 20071226_0055-0135_Fraunhofer_127mmMCTx200.bmp which took up 225 KB of the SD memory card (see Notes on saving cybersketches to PDA, below).

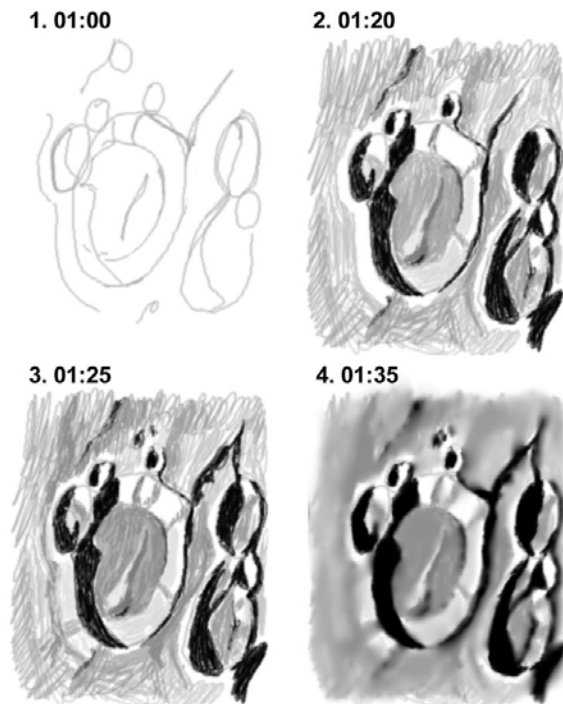


Figure 1: Sequence of saved field cybersketches (times given) showing the development of a freehand PDA lunar observation of Fraunhofer over 40 minutes. Note that the images are orientated correctly, north at top and east at right, as they were made at the eyepiece (an erecting prism was used). Credit: Peter Grego

Ten minutes after the observing session had ended, the PDA was inserted into its desktop cradle connected to the desktop PC and ActiveSync was initiated. The saved BMP image file was located by browsing the PDA's contents on the desktop PC, copying it from the SD card and pasting it into my lunar observations folder on my computer's main hard drive. The image was opened in Corel PhotoPaint 8, and because it was a relatively small 240 x 320 pixel image measuring 8.5 x 11.3 cm (3.3 x 4.4 inches) it was resampled to 300 dpi (but retaining its dimensions), converted to greyscale and saved in JPEG format. The image was

zoomed in to fit the monitor, and the enhancements began with the observation still very much fresh in mind.

A combination of mouse and graphics pad input was used to perform the image enhancements. After enlarging the PDA image, a median filter was used to remove unwanted artefacts, notably pixelation. On viewing the image up close, what ought to be sharply-defined areas of black lunar shadow assumed a patchiness (caused by using a pencil stroke fill rather than flood fill) and displayed a somewhat fuzzy edge. So, the first task was to sharpen the edges, which was achieved through a carefully-applied smear tool and a paint brush. Shadows were intensified using a paintbrush set to darken mode; the brightest areas were brightened with the same tool. Extra coverage was then provided in the corners, using a blending tool, and finally a few extra blends and enhancements to the detail were created using the smear tool. The resulting enhanced cybersketch is faithful to the original observational drawing.



Figure 2: The final, enhanced observational cybersketch of Fraunhofer. Credit: Peter Grego

More details on cybersketching techniques are to be found in my latest book, *Astronomical Cybersketching*, ISBN-13: 978-0387853505, soon to be published by Springer.

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Advertising Manager, SPA

Author, *The Moon and How to Observe It*, *Collision: Earth!*, *Moon Observer's Guide*, *Need to Know Universe*, *Need to Know Stargazing*, *Solar System Observer's Guide*, *Observers Map of the Moon*, *QED Space Guides*, *Venus and Mercury and How to Observe Them*, *Astronomical Cybersketching*, etc

Webmaster, www.lunarobservers.com

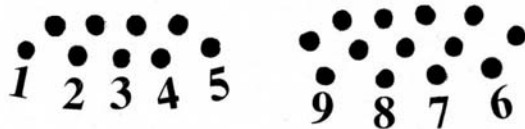
Webmaster, www.baalunarsection.org.uk

Ten Tips for the Would-Be Lunar Stippler

Phil Morgan

Stippling is without doubt the most time consuming and hardest to master of all techniques for portraying the lunar surface. It is not surprising then, that many a would-be lunar stippler falls at the first hurdle. Below are my top-ten tips for getting started on the right track.

1. You are never going to produce thousands of lunar drawings per year, so don't be afraid to purchase the finest quality pens and the best quality paper. In my experience cheap paper is often too absorbent and will make your dots too large.
2. Get a magnifier with a high power. You don't have to spend very much at all to get one that will be adequate. Find by trial and error the ideal height above your paper and construct a frame out of stout (coat hanger) wire, then use some sort of strong epoxy glue to fix your magnifier to it.
3. A good lunar drawing needs a solid foundation. When starting your observational drawings at the telescope look out for 3 lunar features that form a triangle. Visualize these triangles mentally and place the objects at the 3 points on your paper first. This will help your positioning for the rest of the drawing.
4. If you are right handed then your stippling will probably tend to be done from left to right. Try and master the left-handed technique (moving from right to left) for alternate runs of stipple as shown in the order below. This a great help in getting a uniform spacing of your individual dots, the most important prerequisite for a good stipple.



5. Ignore any temptation for regimentation. Straight lines or square boxes of stipple simply won't work!
6. Remember that smaller dots farther apart are used to indicate areas of lighter tone; bigger dots closer together will indicate darker areas.
7. Put in your Indian ink (or whatever) shadows first.
8. Wrinkle ridges are amongst the hardest of all lunar features to portray successfully. Don't be afraid to keep a good quality photograph of some of these on your desktop for reference.
9. Stand back! Take a break now and then to view your work from a distance.
10. When submitting all your hard work for publication don't be afraid to ask for it to be reproduced at as near to normal scale as is practicable. Seeing your handiwork printed out at the size of a postage stamp will make you hopping mad and do nothing for your self esteem!

Practice makes perfect. In the end you will develop your own technique – and there are many. But hopefully this little guide will help you on your way.

LUNAR TOPOGRAPHICAL STUDIES

Website: <http://moon.scopesandscapes.com/>

OBSERVATIONS RECEIVED

KEVIN BERWICK – KILLINEY, DUBLIN, IRELAND Text description of Posidonius

MAURICE COLLINS - PALMERSTON NORTH, NEW ZEALAND Digital images of Mare Nubium, Reiner Gamma, Rupws Recta, T. Mayer, Triesnecker, Alphonsus, the Taurus Littrow Apollo 17 landing site, and mosaics of the 10, 12, 17, and 23 day moon

ED CRANDELL – WINSTON-SALEM, NORTH CAROLINA, USA Digital images of Hyginus, Schiller, Gassendi & Letronne, Messier rays, Ross & Daguerre rays, Kepler rays, Longomontanus-Scheiner ray

COLIN EBDON – COLCHESTER, ESSEX, UK Drawings of Silberslag, Triesnecker (2)

HOWARD ESKILDSEN - OCALA, FLORIDA, USA Digital images of Clavius (2), Moretus, Curtius (2), Mare Fecunditatis mosaic, Ariadaeus-Hyginus mosaic, banded crater reports for Rosse (2), Proclus (2), Messier (2), Maury, Dawes Silberslag, and Ariadaeus

PETER GREGO – St. Dennis, Cornwall, UK. Drawings of Rima Hyginus, Sirsalis, Wrottesley

ROBERT HAYS – WORTH, ILLINOIS, USA Drawings of Guericke, Puiseux & wrinkle ridges

RIK HILL – TUCSON, ARIZONA, USA Digital mosaic of Schiller-Clavius

MICHEL LEGRAND – LA COUYERE, FRANCE Digital images of Rima Ariadaeus, Hyginus, Ariadaeus

RECENT TOPOGRAPHICAL OBSERVATIONS

Posidonius - Kevin Berwick – Killiney, Dublin, Ireland. March 01, 2009 20:20-21:05 UT. Seeing 3, Transparency 4-5, Colongitude 333°. Televue TV101 apochromatic refractor, 540mm focal length, Televue Radian 2-4mm Nagler Zoom eyepiece.

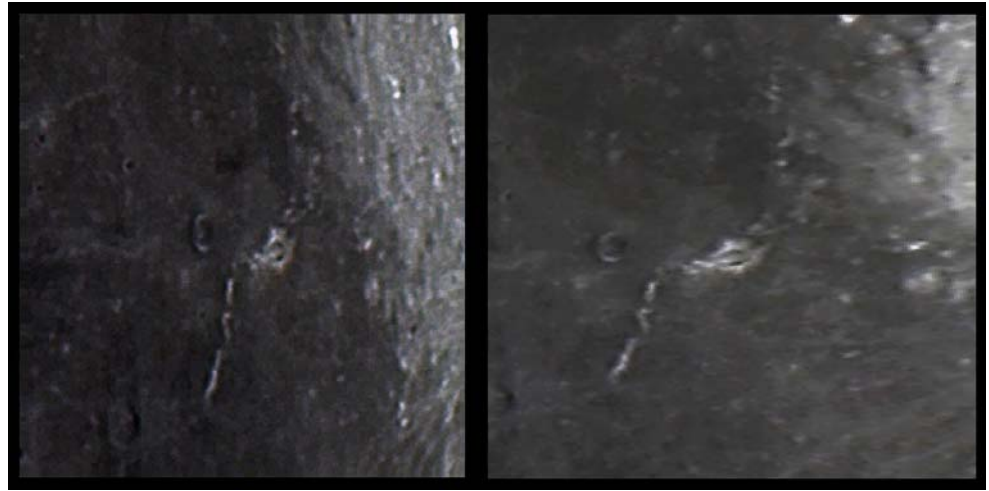
Posidonius, north (east/west) of the Taurus Mountains was beautifully placed for observation this evening. The central crater of the walled plain was easily visible, together with a complex of 3 mountains near the centre of the walled plain. The walls of the feature were beautifully defined and portions of the inner wall were also visible. There is a large crater to the South East, known as Chacornac A. It doesn't demolish Posidonius at any point, which is somewhat surprising. Posidonius J to the North East, was nicely defined, and in shadow. The Eastern wall of Posidonius is very mountainous and in general, appeared wider to the East than to the West. As time went on, Posidonius became like a black hoop on the Moon with deep black shadows encircling the entire feature. East of Posidonius, I saw the rille Rima Bond, a nice bonus observation this evening, and well worth seeking out. A very prominent serpentine ridge, known as Dorsa Smirnov, in the South Eastern part of Mare Serenitatis was well placed for observation. When the sun caught the top of this feature, it really stood out, since the region of Mare Serenitatis to the East was still in quite deep shadow. In addition, quite a few subtle wrinkle rides were visible south of Posidonius, it is a very complex area in general, repaying close examination.

Wrottesley – Peter Grego – St Dennis, Cornwall, UK. January 14, 2009 00:15-01:10 UT. Seeing – clear and cold, Colongitude 123.2-123.7°. 200mm SCT, binoview, 200x. PDA sketch, enhanced in PhotoPaint.



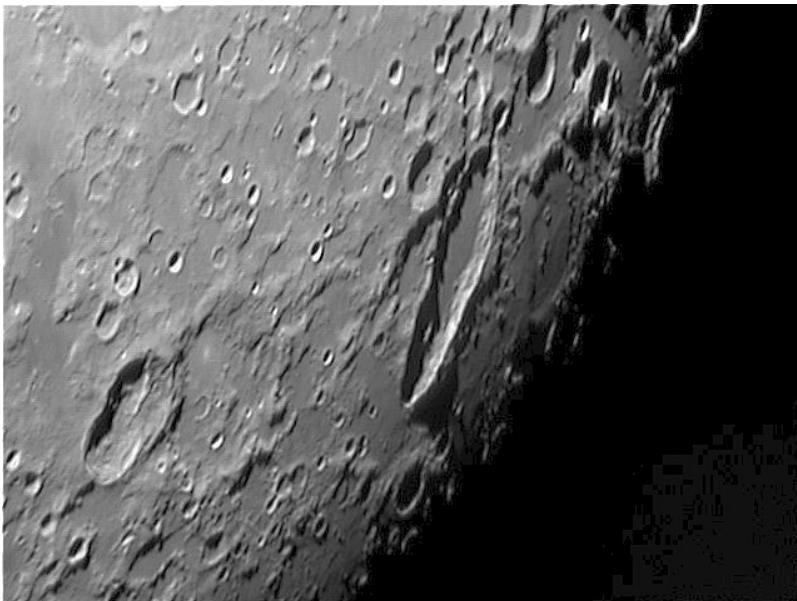
RECENT TOPOGRAPHICAL OBSERVATIONS

Reiner Gamma -
Maurice Collins -
Palmerston North, New
Zealand, February 17,
2009 14:36 UT. C8,
f/10, LPI. Normal view
on left, LTVT rectified
view on right.



Maurice wrote:

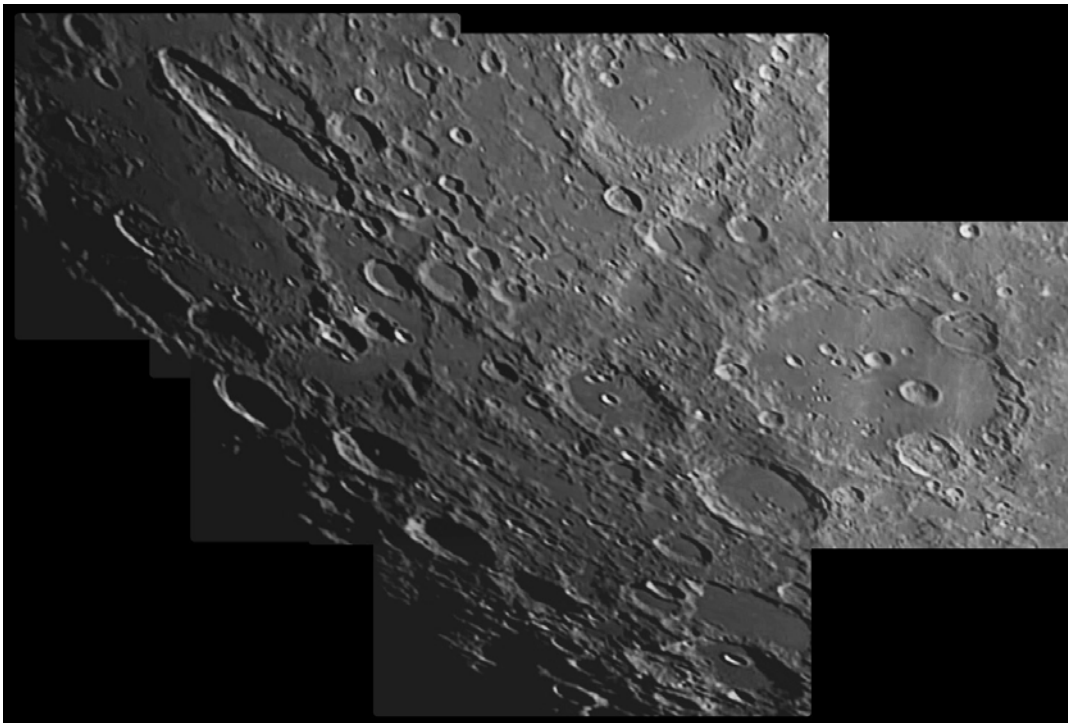
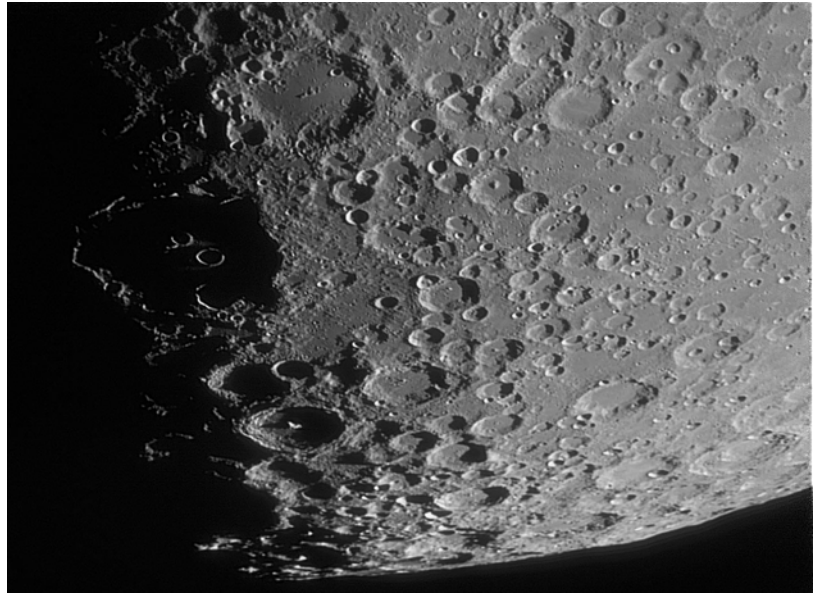
Here is an image I took of Reiner Gamma magnetic anomaly, also on Feb 18 (17). An interesting feature where it is thought that a magnetic field shields the lunar surface from solar wind darkening (maturation) of the soil grains. How it got there is not known but seems to be related to similar features called swirls. Usually they are antipodal to large basin impacts, but Reiner Gamma does not coincide with anything on the far side (though I have to admit I have not looked!). Perhaps that is where the monolith is buried, and not at Tycho afterall! [Editor's note: It's an interesting coincidence that the usual effect of foreshortening is reversed for Reiner Gamma, it appears approximately round in the normal view, but is significantly elongated when the foreshortening is removed.]



Schiller Region - Ed Crandell –
Winston-Salem, North Carolina,
USA. March 08, 2009 00:54 UT.
Seeing 5/10, Transparency 4-5/6,
variable thin clouds, Colongitude
48.5°. 110 mm f/6.5 APO + 3x
barlow, Toucam.

RECENT TOPOGRAPHICAL OBSERVATIONS

Clavius - Howard Eskildsen -
Ocala, Florida, USA. January 05,
2009 01:07 UT. Seeing 8/10,
Transparency 6/6. Meade 6" f/8
refractor, 2x barlow, Orion
Starshoot II.



Schiller to Clavius
- Richard Hill -
Tucson, Arizona,
USA. January 08,
2009 02:17 UT.
C14, f/11, UV/IR
blocking filter,
SPC900NC camera,
Seeing 5/10.
100/2000 images.

RECENT TOPOGRAPHICAL OBSERVATIONS

Hyginus-Agrippa – Michel LeGrand –
La Conyere, France. October 19, 2008
00:32 UT. C11, Toucam pro.

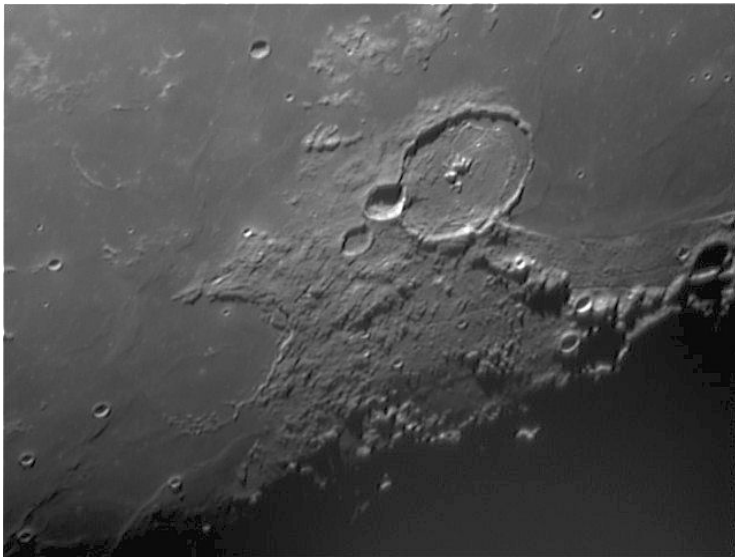


ADDITIONAL TOPOGRAPHICAL OBSERVATIONS



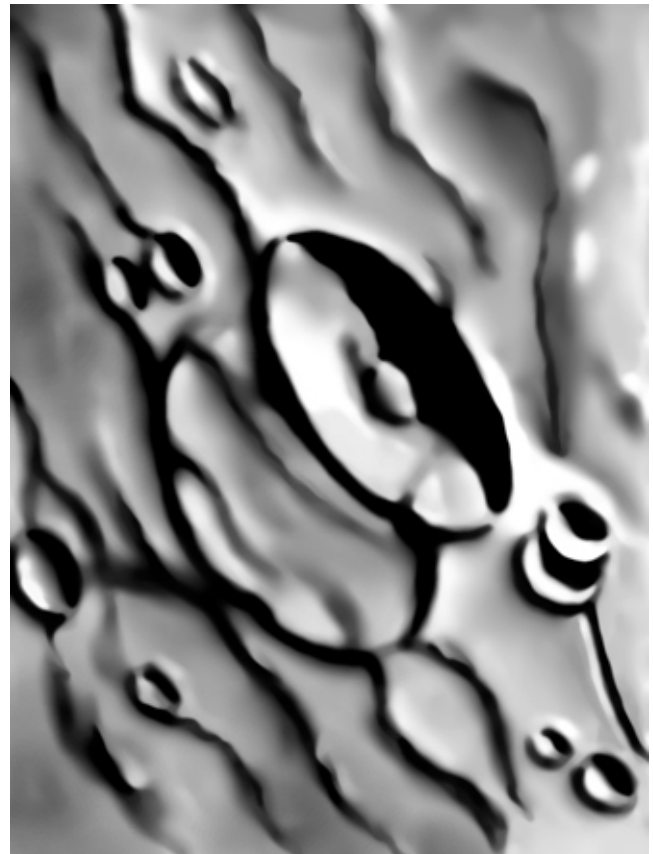
Alphonsus – Maurice Collins - Palmerston North,
New Zealand, January 04, 2009 08:25 UT. C8, f/10,
LPI.

ADDITIONAL TOPOGRAPHICAL OBSERVATIONS



Gassendi & Letronne – Ed Crandell – Winston-Salem, North Carolina, USA. March 08, 2009 00:51 UT. Seeing 5/10, Transparency 4-5/6, variable thin clouds, Colongitude 48.5°. 110 mm f/6.5 APO + 3x barlow, Toucam.

Sirsalis – Peter Grego – St Dennis, Cornwall, UK. January 09, 2009 21:05-21:50 UT. Seeing – AII-III, cold, Colongitude 73.2-73.4°. 200mm SCT, binoview, 200x. PDA sketch, enhanced in PhotoPaint.



BRIGHT LUNAR RAYS PROJECT

Coordinator – Wayne Bailey – wayne.bailey@alpo-astronomy.org

Bright Lunar Rays Website: <http://moon.scopesandscapes.com/alpo-rays.html>

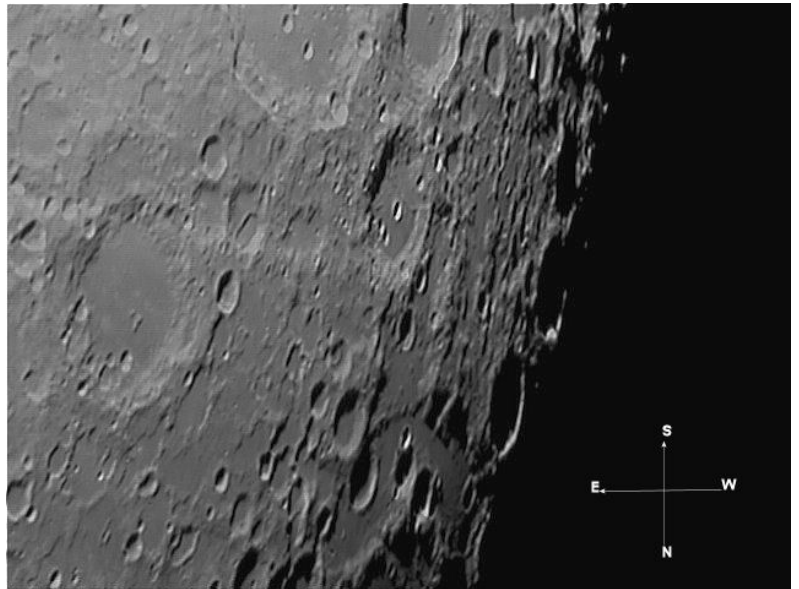
RECENT RAY OBSERVATIONS



Messier Rays – Ed Crandall – Winston-Salem, North Carolina, USA, January 04, 2009 23:52 UT. Seeing 5/10, Transparency 4/6, Colongitude 13.6°. 110mm, f/6.5, APO, 3x barlow, Toucam.

Ray Segment Longomontanus to Scheiner - Ed Crandall – Winston-Salem, North Carolina, USA. March 08, 2009 00:59 UT. Seeing 5/10, Transparency 4-5/6, variable thin clouds, Colongitude 48.5°. 110mm, f/6.5, APO, 3x barlow, Toucam.

Ed wrote: The image showing the craters of Longomontanus and Scheiner was brought to my attention while looking at the preview of that region over the computer screen. I noted a 'ray-like' feature connecting the southwestern rim of Longomontanus with the northern rim of Scheiner. I've seen this feature before, I think. This ray-like feature appeared more prominent over the screen compared to the attached image.



BANDED CRATERS PROGRAM

Coordinator – Wayne Bailey – wayne.bailey@alpo-astronomy.org

Banded Craters Program Website: <http://moon.scopesandscapes.com/alpo-bcp.html>

A.L.P.O. Lunar Section: Selected Areas Program Banded Craters Observing Form

Crater Observed: Proclus

Observer: Howard Eskildsen

Observing Station: Ocala, Florida

Mailing Address: P.O. Box 830415, Ocala, Florida, 34483

Telescope: Meade Refractor 15.2 cm f/8

Imaging: NexImage, 3X Barlow, Filters: None

Seeing: 8/10 Transparency: 5/6

Date (UT): 2009/01/03 Time (UT): 00:31

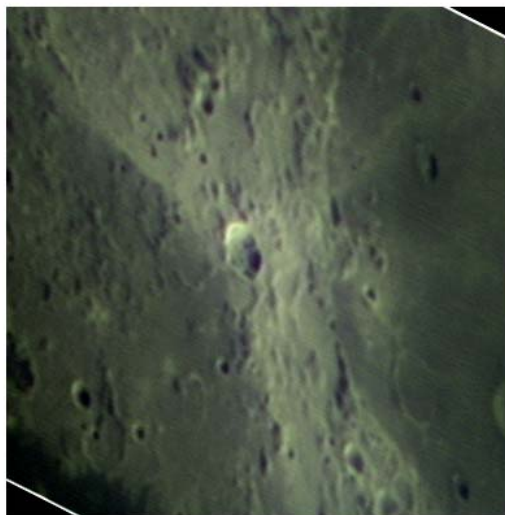
Colongitude: 351°

Position of crater: Selen. Long. Selen. Lat.
46.8° East 16.1° North

Lunar Atlas Used as Reference: Virtual Moon Atlas Expert Version 2.1 2004-11-07

Image (north up):

Comments:



Two bright bands cross the dark margin of the eastern crater wall.

A.L.P.O. Lunar Section: Selected Areas Program Banded Craters Observing Form

Crater Observed: Messier & Messier A

Observer: Howard Eskildsen Observing Station: Ocala, Florida

Mailing Address: P.O. Box 830415, Ocala, Florida, 34483

Telescope: Meade Refractor 15.2 cm f/8

Imaging: Orion Starshoot II, 2X Barlow, Filters: None

Seeing: 8/10 Transparency: 6/6

Date (UT): 2009/01/05 Time (UT): 01:14

Colongitude: 16°

| | | |
|---------------------|--------------|------------------------|
| Position of crater: | Selen. Long. | Selen. Lat. |
| | 47.6° East | 1.9° South (Messier) |
| | 46.8° East | 2.0° South (Messier A) |

Lunar Atlas Used as Reference: Virtual Moon Atlas Expert Version 2.1 2004-11-07,
Rukl, Antonin, Atlas of the Moon

Image (north up):

Comments:



Dark band across Messier
is distinct while Messier A
seems more subdued and
diffuse, probably due to the
illumination angle.

LUNAR TRANSIENT PHENOMENA

Coordinator – Dr. Anthony Cook – atc@aber.ac.uk

Assistant Coordinator – David O. Darling - DOD121252@aol.com

LTP NEWSLETTER – MARCH 2009

Dr. Anthony Cook - Coordinator

Observations for February 2009 were received from the following observers: Jay Albert (FL, USA), Clive Brook (Plymouth, UK), Maurice Collins (New Zealand), myself (Aberystwyth, UK), and Marie Cook (Mundesley, UK).

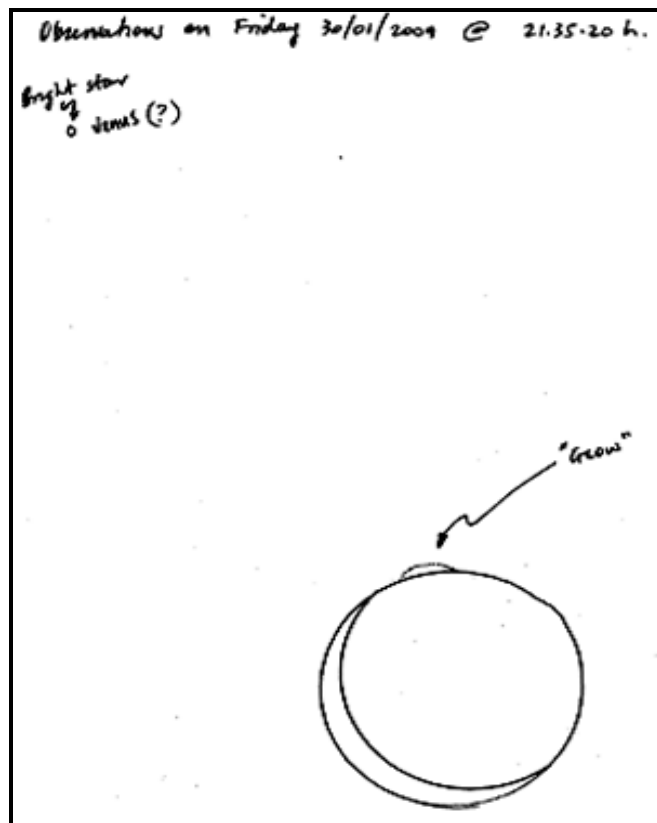


Fig 1. Sketch by Ray Masini

Recent LTP?: On 2009 Jan 30th at 21:35:20 local day light saving time in Perth, Western Australia, Ray Masini was watching the lunar crescent with the naked eye, looked away for a few seconds, and upon glancing at the Moon again saw a glow on the southern limb - dark side, as seen in the sketch above. Remember in the southern hemisphere on Earth, constellations, planets and the Moon all appear inverted compared to what northern hemisphere observers see – so in this case we would expect south to be "up". His sketch shows the Moon relative to Venus and he commented that the glow appeared not on the Moon, but perhaps slightly above. The effect stayed the same for approximately 5 or so seconds and then gradually shrunk back to the lunar limb and disappeared. The latter fade stage took about 10 seconds. The time given above was determined from the observer's watch, allowing for the fading effect. There were no terrestrial clouds present during this event and nothing unusual was seen afterwards. He contacted Perth observatory, and they put him in contact with Prof Arlin Crotts (Columbia University, NY, USA), in case he had

detected anything with his robotic telescope system, Unfortunately his scopes are in a different longitude zone, and so he contacted me in case I knew of any confirming observations.

This LTP has been a puzzle since it was first reported. The time and date in UT were 2009 Jan 30 UT 12:35:20 and so I fed this into Microsoft's "World Wide Telescope" and found that there was a very red carbon star, 19 Psc (just visible to the naked eye), just off the limb of the Moon, though this was about 20 minutes after the reported time. Interestingly this star was to undergo a grazing occultation from the observer's site, and this could well have explained the appearance and fade as the star passed between mountains and valleys. The areal nature of the effect could have been explained by chromatic aberration in the observer's eye, especially if they had red sensitivity at low light levels. Unfortunately although the theory was a very interesting idea, Andrew Elliott - the BAA's occultation coordinator, was able to show that the graze would happen only well after the Moon had set from the observer's location.

Another possible explanation might be sunlit peaks on the lunar limb, just west of the south pole. The problem here though is that this would not explain the appearance and fade effect, unless there was some variable cloud or haze in our atmosphere that Ray did not detect. So unless we can obtain some images that someone took near the longitude line of Perth, and around date and UT given above, I'm afraid that this LTP will remain an enigma. Please let me know if you know of anybody who might have taken such images around this time?

Earthshine Alert: On 2009 Mar 01 UT 18:50-21:00 Graham Smith (East Yorkshire, UK) was observing the Moon with a 127mm Maksutov Cassegrain telescope (with diagonal), initially with a zoom eyepiece and later a Plössl. He observed an area that he estimated to lie between Plato and Sinus Iridum, and appeared to be glowing in Earthshine as a "Nebulous.Patch". The patch was white in color, about the size of Aristillus crater would have been and was the brightest feature in Earthshine. His report said that he could definitely make out the northern shore of Mare Imbrium. He checked out his zoom eyepiece on different settings and even tried a Plössl and the effect was still present. Being what he regarded as an inexperienced observer, he first attempted to contact four colleagues, for verification but did not get replies from three of them and the fourth had a telescope that was too small to show Earthshine. In case this was a real LTP event he "Googled" the subject on the Internet to find out who to contact and came across my name in connection with the BAA and ALPO. I unfortunately found his email much later in the evening and started to phone a few observers and email others from about 22:00UT onwards. The reports that came back, from the few with clear sky, all showed nothing in the area concerned, but found Aristarchus as a "bright nebulous patch". Those who have reported LTP for me before know that I tend to debrief observers after an event, by getting them to analyze their own observation, with some critical questions, e.g. what other features could they see and how did they appear compared to the LTP area etc. Some email communication took place with Graham Smith, and he forwarded me a sketch that he made at the time, that illustrated what he saw. He also provided some hand held digital camera images, though due to the difficulty in setting this up had no luck in capturing the area concerned – nevertheless these confirmed that the Earthshine was clearly visible through his telescope. In return I sent him some example Earthshine images, and he eventually reached a conclusion that he had probably been mistaken in the location of the bright patch, and now strongly suspects that it was indeed Aristarchus. The fade at 21:00 may have been due to the Moon starting to set behind some roof tops. I suspect that the use of the diagonal might have perhaps been the cause of the identification problem since this gives one a reversed image compared with what we see on maps/photos of the Moon.

Despite this turning out not to be a LTP, I would nevertheless like to thank Graham for bringing this observation to our attention and it should not discourage him from lunar observing. Unlike some past inexperienced observers, he did at least attempt to contact some other observers for verification, though this

did not meet with much success. Furthermore he also investigated if the effect could have been coming from glare in his eyepiece – this was not to blame. So apart from perhaps not having much experience in the general appearance of the Moon in Earthshine, he did in fact follow mostly sensible procedures. Having examined past reports of Earthshine LTP from the last few hundred years, one wonders if some of the famous astronomers of the day were any better at understanding what they saw in Earthshine, or if it was the case that they were purely seeing LTP (“volcanoes” these were sometimes called at the time) because the reflectivity of the Earth from clouds, was bright enough to bring more detail into view (and to their attention) than they would normally see?

Repeat illumination predictions, including the more numerous illumination only events can be found on the following web site: <http://users.aber.ac.uk/atc/tlp/tlp.htm> .For members who do not have access to the internet, please drop me a line and I will post predictions to you. If you would like to join the LTP telephone alert team, please let me know your phone No. and how late you wish to be contacted. If in the unlikely event you see a LTP, please give me a call on my cell phone: +44 (0)798 505 5681 and I will alert other observers. Note when telephoning from outside the UK you must not use the (0). When phoning from within the UK please do not use the +44!

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KEY TO IMAGES IN THIS ISSUE

1. **Alphonsus**
2. **Clavius**
3. **Fraunhofer**
4. **Gassendi**
5. **Guericke**
6. **Hyginus**
7. **Longomontanus**
8. **Messier**
9. **Posidonius**
10. **Proclus**
11. **Reiner Gamma**
12. **Schiller**
13. **Sirsalis**
14. **Wrottesley**

FOCUS ON targets

X = Triesnecker - Ariadaeus (May)

Y = Mare Fecunditatus (July)

Z = Deslandres (September)

