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THE LUNAR OBSERVER

A PUBLICATION OF THE LUNAR SECTION OF THE A.L.P.O.
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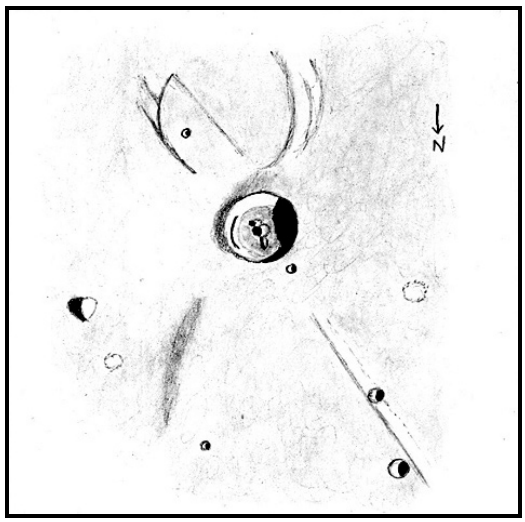
RECENT BACK ISSUES: http://moon.scopesandscapes.com/tlo_back.html

FEATURE OF THE MONTH – JANUARY 2012

LAMBERT



Sketch and text by Robert H. Hays, Jr. - Worth, Illinois, USA
September 20, 2011 08:08-08:40 UT, 15 cm refl, 170x, seeing 8/10

I sketched this crater and vicinity on the morning of Sept. 20, 2011 after watching two stars reappear from occultation. Lambert is a relatively isolated crater in central Mare Imbrium. It has a substantial central peak and two smaller interior peaks. There is also evidence of terracing inside its east rim. Lambert A is the tiny pit just northwest of Lambert, and Lambert T is the similar pit farther to the north. The large, isolated peak to the east is Lambert gamma. A small, bright, shadowless patch is north of Lambert gamma, and a vague wrinkle lies between this patch and Lambert T, extending toward Lambert. A straight, low ridge to the northwest points toward Lambert, but does not reach that crater. The modest crater La Hire B actually sits upon this ridge, and La Hire A is the someewhat larger crater north of La Hire B. Another bright shadowless patch is south of La Hire B and west of Lambert. Lambert B is the tiny pit south of Lambert. This craterlet sits within the ghost ring Lambert R. The east rim of Lambert R is low, but fairly well defined. The west end of the ghost ring is vaguer. There are either multiple rims there or a low slope

catching the sun. Lambert R is not a conspicuous feature. It may be exaggerated on the sketch for clarity. Lambert R has no detectable north or south rims. There is a dusky area between its west side and Lambert. A narrow strip of grayish shadowing almost spans the interior of Lambert R, and two short strips protrude from its east rim. These dark strips are at least approximately aligned with the ridge northwest of Lambert.

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LUNAR CALENDAR

JANUARY – FEBRUARY 2012 (UT)

Jan. 01	06:15	First Quarter
Jan. 02	20:20	Moon at Apogee (404,579 km – 251,394 miles)
Jan. 02	24:00	Moon 4.8 Degrees NNW of Jupiter
Jan. 06	21:48	Extreme North Declination
Jan. 09	07:31	Full Moon
Jan. 14	01:00	Moon 8.4 Degrees SSW of Mars
Jan. 16	09:08	Last Quarter
Jan. 17	17:00	Moon 6.1 Degrees S of Saturn
Jan. 17	21:29	Moon at Perigee (369,882 km – 229,834 miles)
Jan. 20	02:12	Extreme South Declination
Jan. 21	13:00	Moon 1.8 Degrees SSE of Pluto
Jan. 22	11:00	Moon 4.7 Degrees NNW of Mercury
Jan. 23	07:41	New Moon (Start of Lunation 1102)
Jan. 25	07:00	Moon 5.5 Degrees NNW of Neptune
Jan. 26	14:00	Moon 6.3 Degrees NNW of Venus
Jan. 27	23:00	Moon 5.5 Degrees NNW of Uranus
Jan. 30	12:00	Moon 4.4 Degrees NNW of Jupiter
Jan. 30	17:43	Moon at Apogee (404,324 km – 251,235 miles)
Jan. 31	04:11	First Quarter
Feb. 03	07:12	Extreme North Declination
Feb. 07	21:55	Full Moon
Feb. 10	04:00	Moon 9.0 Degrees SSW of Mars
Feb. 11	18:33	Moon at Perigee (367,919 km – 228,614 miles)
Feb. 12	22:00	Moon 6.0 Degrees SSW of Saturn
Feb. 14	17:05	Last Quarter
Feb. 16	08:36	Extreme South Declination
Feb. 17	22:00	Moon 1.7 Degrees SSE of Pluto
Feb. 21	20:00	Moon 5.5 Degrees NNW of Neptune
Feb. 21	22:36	New Moon (Start of Lunation 1103)
Feb. 23	01:00	Moon 5.6 Degrees NNW of Mercury
Feb. 24	08:00	Moon 5.3 Degrees NNW of Uranus
Feb. 25	21:00	Moon 3.2 Degrees N of Venus
Feb. 27	03:00	Moon 3.8 Degrees NNW of Jupiter
Feb. 27	14:03	Moon at Apogee (404,862 km – 251,570 miles)

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 is on-line at: **http://www.alpoastronomy.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.

Note: The published images now contain links to the original, full resolution images. Clicking on an image while connected to the internet, will download the original image, which in some cases has significantly higher resolution than the published version.

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: Archimedes

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 **March 2012** edition will be **Archimedes**, which is conveniently available with sunrise just after 1st quarter. Observations at all phases and 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 Archimedes to your observing list and send your favorites to:

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

Deadline for inclusion in the Archimedes article is February 20, 2011

FUTURE FOCUS ON ARTICLES:

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

Pyrenees Mts.	**May 2012**	**April 20, 2012**

FOCUS ON: Copernicus

By Wayne Bailey
Coordinator: Lunar Topographical Studies

Copernicus is not the largest, youngest, oldest, most complex, or most simple crater on the moon. However, it is large enough to be easily studied, complex enough to be interesting, conspicuous on the mare, eye-catching with its ray system, well preserved, and nearly ideally positioned for observation from the Earth. Even casual lunar observers usually recognize Copernicus. Around full moon, Copernicus along with Tycho and Kepler can't be missed (fig. 1). It was the focus of Shoemaker & Hackman's (1962) pioneering application of stratigraphy to lunar feature ages, and is the namesake for the Copernican era of lunar history, the most recent 1.1 billion years. Among the very prominent lunar features, only Tycho is younger.

***FIGURE 1*. *Copernicus, Kepler & Tycho.* –** *Jerry Hubbell, Locust Grove, Virginia, USA. November 13, 2011 03:38 UT. Colongitude 120.1º, Seeing 5/10, Transparency 5/6. 0.13m Refractor f/7.5, webcam based CCD.*

With its crisp rim, terraced inner wall, central peaks and conspicuous ray system, it presents the classic image of a lunar crater. Situated close to the center of the visible hemisphere, it's illuminated from shortly after 1st Quarter past 3rd Quarter, and observational complications due to foreshortening are minimal.

The crater floor has several interesting features (fig. 2). It is basically flat, as would be expected for this size crater. The NW quadrant appears fairly smooth but the remainder is hummocky. There are several peaks trending NE-SW fairly well centered on the floor. These peaks are lower and the crater is shallower than would be expected for the crater's size, indicating that it has been filled in by magma or debris. Close examination of the floor reveals numerous domes and complex systems of small fractures. There are also small lava pools scattered around the floor and on the walls.

***FIGURE 2*. *Copernicus*. –** William Dembowski, Windber, Pennsylvania, USA. October 7, 2011 23:48 UT Colongitude 39.9º, Seeing 5/10. Celestron 9.25" SCT f/10, DMK41 UV/IR filter.

The outline of Copernicus is not circular, but polygonal, approximately octagonal (fig. 3). Individual wall sections are straight, not curved. The interior walls present a beautiful example of terracing, produced by sections of wall sliding downward into the crater. Again, careful observation shows that the terraces are not horizontal, but tilt down on their outer edges. The slumped blocks have slid down a curved surface (not a straight slope), tilting as they go. Note that the inner edges of the terraces are illuminated, but there is shadow where they abut the wall above on both sides of the crater. Closer examination reveals lava pools in these troughs also. Although lava flows seem to have been significant within Copernicus, it has not been flooded to the extent that older craters such as Alphonsus or Gassendi have been, possibly because the moon's crust thickened as it cooled so magma was less accessible at the time of Copernicus' formation.

A uniform (more or less) hummocky debris field surrounds the crater (out to about 0.5 crater radius in some directions). These blocks are the low energy ejecta from the crater. They didn't travel far and survived intact Beyond this, out to about one crater radius, radial

FIGURE 3. *– Michael Sweetman, Tucson, Arizona, USA, October 11, 2011 06:31 UT. Seeing 5/10 Transparency 3.5/6. 4" f/20 refractor. DMK21 IR block filter.*

features begin to appear, although it's still hilly. Although it's referred to as radial, the features are actually a mixture of radial (aligned with the crater center), tangential (aligned with the crater rim), and some in-between. Within this region there are some nice strings of craters. Beyond about 2 crater radii, secondary craters and rays are the obvious ejecta features (fig. 4). These overlie older craters, such as Eratosthenes, showing that they already existed when Copernicus was formed. Radial, tangential, and even oval features can be found among the rays.

Even considering its youth, the ray system of Copernicus is very bright. It has been suggested that the impact which formed the crater, penetrated the dark mare basalt and excavated underlying light colored highland material, thus forming lighter than usual rays.

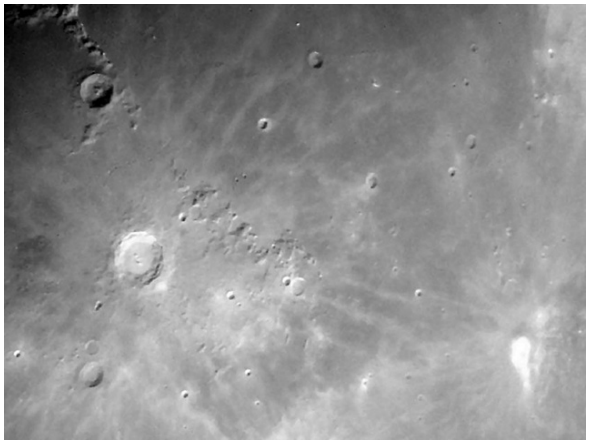


FIGURE 4. ***Copernicus Rays*** *– Andy Miller, Conneaut, Ohio, USA. September 22, 2008 08:30-13:00 UT. 4" Refractor, afocal, 17mm eyepiece, HP point & shoot digital camera.*

Beyond the crater itself, but still within the ray field, many more, interesting features can be found; dome fields around Milichius & Hortensius, dark halo craters to the southeast, the banded crater Pytheas, the mostly buried crater Stadius, and the Montes Carpatus with the superimposed craters T. Mayer and Gay-Lussac to name just a few. This is a fascinating and conveniently observable area, that is rewarding to examine with any telescope, and continues to produce new rewards with more detailed examination.

ADDITIONAL READING

Bussey, Ben & Paul Spudis. 2004. The Clementine Atlas of the Moon. Cambridge University Press, New York.

Byrne, Charles. 2005. Lunar Orbiter Photographic Atlas of the Near Side of the Moon. Springer-Verlag, London.

Gillis, Jeffrey J. ed. 2004. Digital Lunar Orbiter Photographic Atlas of the Moon.. Lunar & Planetary Institute, Houston. Contribution #1205 (DVD). (http://www.lpi.usra.edu/resources/lunar_orbiter/).

Grego, Peter. 2005. The Moon and How to Observe It. Springer-Verlag, London.

North, Gerald. 2000. Observing the Moon, Cambridge University Press, Cambridge.

Rukl, Antonin. 2004. Atlas of the Moon, revised updated edition, ed. Gary Seronik, Sky Publishing Corp., Cambridge.

Schultz, Peter. 1976. Moon Morphology. University of Texas Press, Austin.

Shirao, Motomaro & Charles A. Wood. 2011. The Kaguya Lunar Atlas. Springer, New York

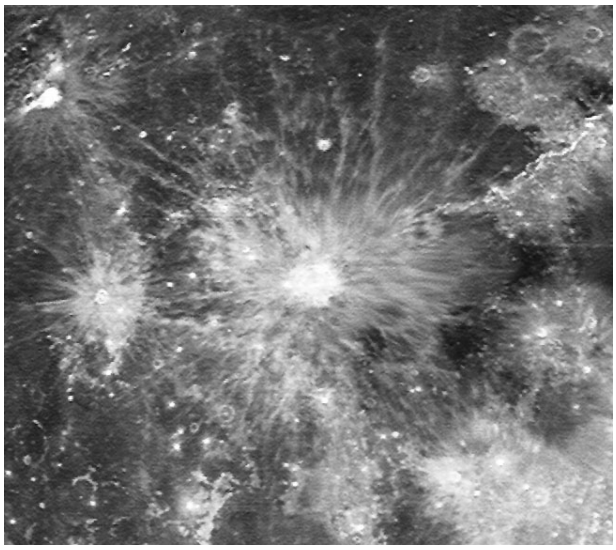
Shoemaker, E.M. & R.J. Hackman. 1962. The Moon, IAU Symp. 14. Z. Kopal & Z.. Mikhailov, eds. Academic Press, London. pp 289-300, "Stratigraphic Basis for a Lunar Time Scale". (available online from ADS at http://articles.adsabs.harvard.edu/cgi-bin/nph-iarticle_query?1962IAUS...14..289S&data_type=PDF_HIGH&whole_paper=YES&type=PRINTER&filetype=.pdf)

Wlasuk, Peter. 2000. Observing the Moon. Springer-Verlag, London.

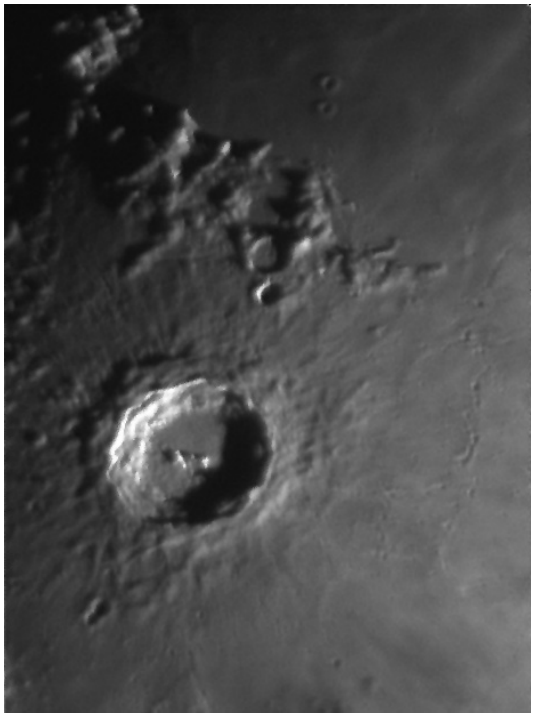
Wood, Charles. 2003. The Moon: A Personal View. Sky Publishing Corp. Cambridge.

The-Moon Wiki. http://the-moon.wikispaces.com/Introduction

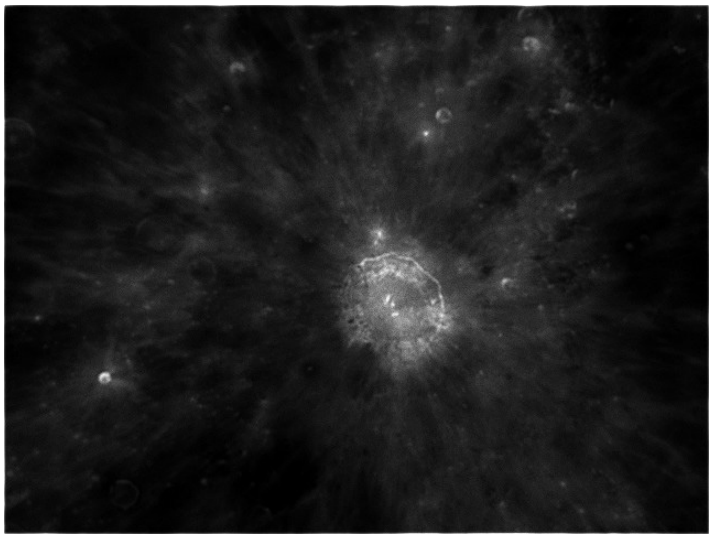
ADDITIONAL COPERNICUS OBSERVATIONS



ENHANCED COPERNICUS RAYS – Jerry Hubbell, Locust Grove, Virginia, USA. November 13, 2011 03:38 UT. Colongitude 120.1º, Seeing 5/10, Transparency 5/6. 0.13m Refractor f/7.5, webcam based CCD. This is an enhanced section of figure 1 above.



COPERNICUS – Jerry Hubbell, Locust Grove, Virginia, USA. December 5, 2011 00:39 UT. Colongitude 26.1º, Seeing 4/10, Transparency 5/6. 0.2m RC 2x barlow, DMK21AU04.AS.



COPERNICUS – Michael Sweetman, Tucson, Arizona, USA, November 6, 2011 09:05 UT. Seeing 5/10 Transparency 4/6. 4" f/20 refractor. DMK21 IR block filter. North right, east down.

SUNRISE OVER RIMA HESIODUS

Peter Grego

The area was chosen prior to the observing session and a low-contrast drawing template was prepared using LTVT to ensure positional accuracy. This template was transferred to the PDA and directly drawn over at the telescope eyepiece. Hesiodus (fig. 1) was its own diameter from the sunrise terminator, and owing to the limitations of the template most of its eastern wall lay outside the drawing. About half of Hesiodus' interior was covered with shadows cast by its eastern rim, its southern floor completely covered with shadow while its northern floor was crossed by a couple of prominent shadow spires; the southern most of these, crossing the central part of the floor, lay adjacent to the small central crater Hesiodus D. Immediately north and northwest of Hesiodus was a cluster of north-south aligned mountain ridges, the westernmost of these (just for the purposes of this report, designated Hesiodus NW Alpha) casting half a dozen shadow spires to the west across Mare Nubium; the longest of these touched the southern tip of a low north-south ridge in the mare. This ridge (just for the purposes of this report, designated Ridge A) could be traced north to the edge of the area depicted, crossing the shadow cast by Hesiodus B and to the shadow cast by a small unnamed mountain spur shown at the top of the sketch. Hesiodus B was largely full of shadow and it cast a long pointed shadow which just failed to meet the terminator. East of Hesiodus B was observed the ruined crater Hesiodus X, whose walls formed a disjointed arc of peaks; its northern wall is presumed to be buried beneath the mare, but there was a slight indication of shadowing running around the northeast where the wall is presumed to be buried. The large blunt shadow cast by the main component of Hesiodus X's western wall met the lower slopes of Hesiodus B's outer eastern wall. Rima Hesiodus emerged from the shadow cast by Hesiodus' northwestern rim and could be traced across the mare to the sunrise terminator; although linear, Rima Hesiodus appeared slightly irregular along its length, with slight variations in the brightness of its inner northern wall, hinted at in this sketch. Rima Hesiodus ran across a linear shadowing running from the southern tip of the aforementioned Hesiodus NW Alpha to the shadow cast by Hesiodus A. Hesiodus A, adjoining Hesiodus' southwestern wall, was largely shadow-filled, and its western rim cast a long broad shadow which failed to meet the terminator; a small mountain was observed catching sunlight above the shadow to the west of southern Hesiodus A, giving the shadow group a multi-spired appearance. The southern edge of the sketch took in ridges along northern Weiss, and part of Weiss E was observed catching sunlight beyond the terminator. The terminator itself was complicated, and there were suggestions of a low ridge, particularly southwest of Hesiodus B, where a dark linear northeast-southwest shading linked the aforementioned Ridge A to the terminator. Immediately west of the aforementioned Hesiodus NW Alpha there appeared a small elongated hill, not very bright, catching sunlight.

Figure 1. ***Rima Hesiodus.*** *– Peter Grego, St. Dennis, Cornwall, UK. November 4, 2011 20:00-20:45 UT. Seeing AII, clear, occasional bonfire smoke. Colongitude 18.9-19.2°. 300 mm Newtonian, 170X, integrated light.*

LUNAR TOPOGRAPHICAL STUDIES

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

Assistant Coordinator – William Dembowski - dembowski@zone-vx.com

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

OBSERVATIONS RECEIVED

MAURICE COLLINS - PALMERSTON NORTH, NEW ZEALAND. Digital images of 3, 11, 13, 14, 24 & 25 day moon, 1st Qtr Moon, Theophilus.

ED CRANDALL – LEWISVILLE, NORTH CAROLINA, USA. Digital images of Lacus Mortis & Maurolycus.

HOWARD ESKILDSEN - OCALA, FLORIDA, USA. Digital image of Bellot. Two Full Moon images with Mountains & Plains.

PETER GREGO – ST. DENNIS, CORNWALL, UK. Drawing of Vallis Schrodinger.

HAYS, ROBERT - WORTH, ILLINOIS, USA. Drawings of Lambert & Reiner.

JERRY HUBBELL – LOCUST GROVE, VIRGINIA, USA. Digital images of Clavius-Moretus, Cichus(2), Copernicus, Moretus & Plato-Vallis Alpes. Clavius rim elevation measurements.

MILLER, ANDY – CONNEAUT, OHIO, USA. Digital image of Copernicus-Eratosthenes.

SWEETMAN, MIKE - TUCSON, ARIZONA, USA. Digital image of Copernicus(2).

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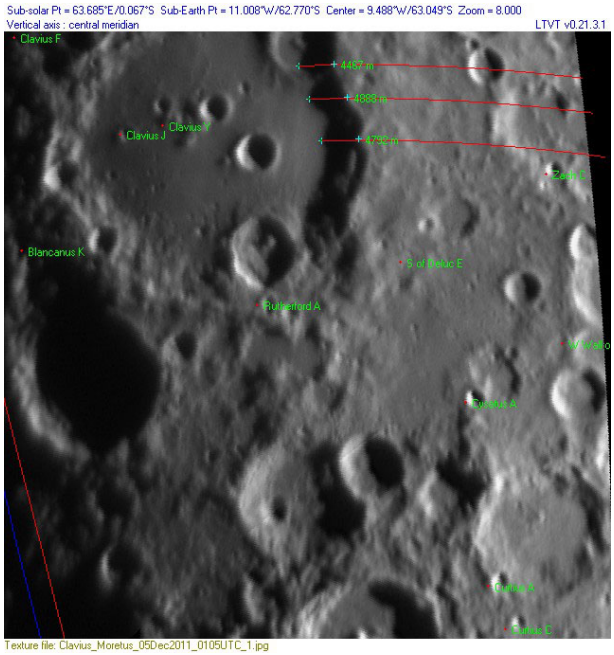
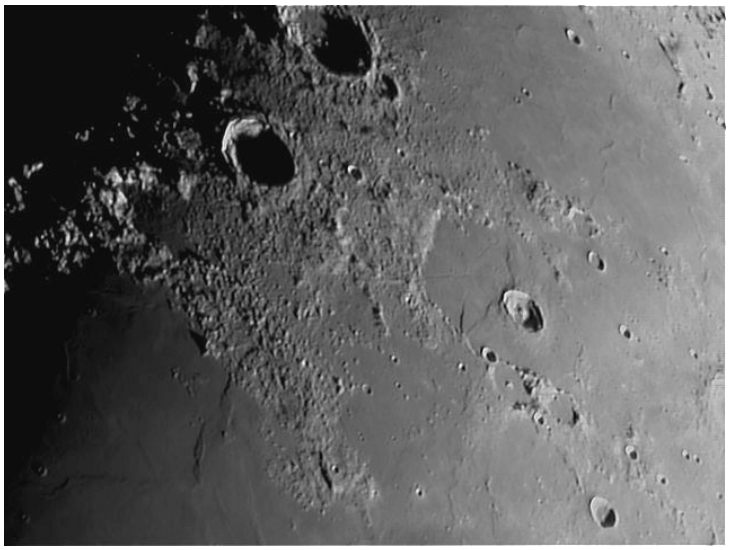
HEIGHT MEASUREMENTS



CLAVIUS RIM– Jerry Hubbell, Locust Grove, Virginia, USA. December 5, 2011 01:05 UT. Colongitude 26.4º, Seeing 4/10, Transparency 5/6. AT8RC, 8" RC, 2x barlow, DMK21AU04.AS

RECENT TOPOGRAPHICAL OBSERVATIONS

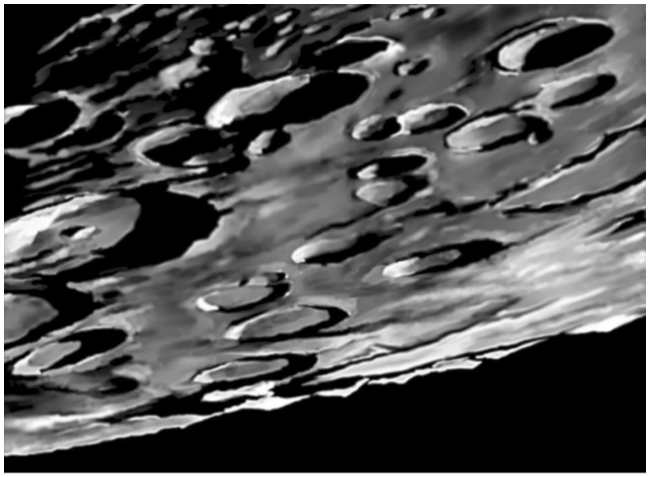
THEOPHILUS - Maurice Collins-Palmerston North, New Zealand. December 2, 2011 08:22 UT. Seeing A-III, some clouds. ETX-90 SCT, 2x barlow.



LACUS MORTIS – Ed Crandall – Lewisville, North Carolina, USA. December 1, 2011 23:15 UT. 110 mm f/6.5 APO, 3x barlow, ToUcam

BELLOT - Howard Eskildsen-Ocala, Florida, USA. December 5, 2011 01:00 UT. Seeing 8/10, Transparency 4/6. 6" f/8 refractor, Explore Scientific lens 2X Barlow, DMK 41AU02.AS, IR block & V block filters.

RECENT TOPOGRAPHICAL OBSERVATIONS



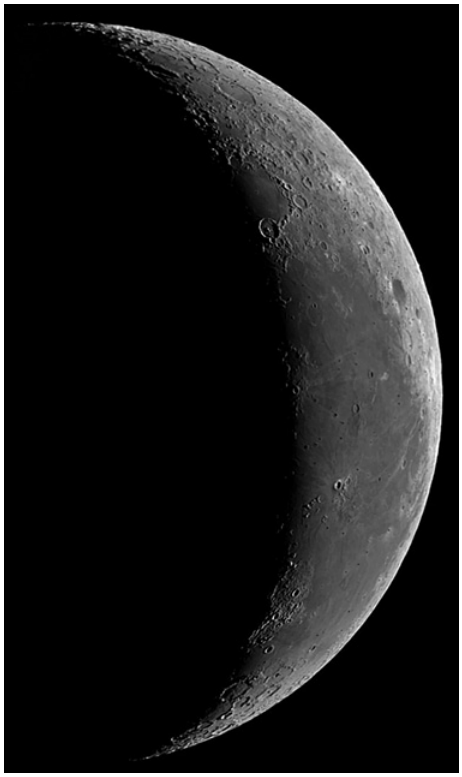
VALLIS SCHRODINGER – Peter Grego, St. Dennis, Cornwall, UK. December 28, 2011 17:30-18:15 UT. Seeing AII- slight wind, occasional fleeting cloud. Colongitude 314.4-314.8°. Libration: latitude -05°50' to -05°53', longitude: +05°18' to +05°12'. 200 mm SCT, 125 & 250X, binoviewer, integrated light.

On noticing the extremely good libration for the Moon's southeastern limb it struck me that Vallis Schrodinger might possibly be visible, given the fact that illumination conditions were also ideal. On consulting LTVT this exceedingly elusive feature in the libration zone was predicted to be visible as a sliver of darkness at the limb. The LTVT simulation was used to prepare a cybersketch template to ensure positional accuracy; this was directly drawn over at the telescope eyepiece with features that were visible. The area chosen to portray included the southeastern limb, with most of Neumayer and Helmholtz (at the mid-left side) across to most of Gill (mid-right side); the craters at upper right include Gill C. Near the limb (left of centre, its own minor diameter away from limb), Hale was clearly visible as an individual crater. Along the limb (from left to right) was seen Schrodinger itself (eastern half portrayed), Sikorsky, the thin shadow cast by Vallis Schrodinger and its far eastern wall to a peak (presumably the rim of Moulton) near the right side. Orientation was difficult owing to the difference in appearance of the area compared to the mean view as presented in Rukl's atlas, but consulting the Libration Zone V map made things clearer. Seeing conditions and the weather were not the best, and indeed cloud ended the session. The use of a binoviewer and erecting prism introduced a slight red fringe at the limb. However, the narrow shadow in Vallis Schrodinger's interior was discerned. The portrayed profile of the limb is far from what I would consider a detailed and accurate representation; it was far more complicated than I have shown, with numerous additional minor bumps, but it is satisfactory enough to convey a general impression – my first of this particular feature. The observational cybersketch was retouched immediately after the observing session on the PC in PhotoPaint.

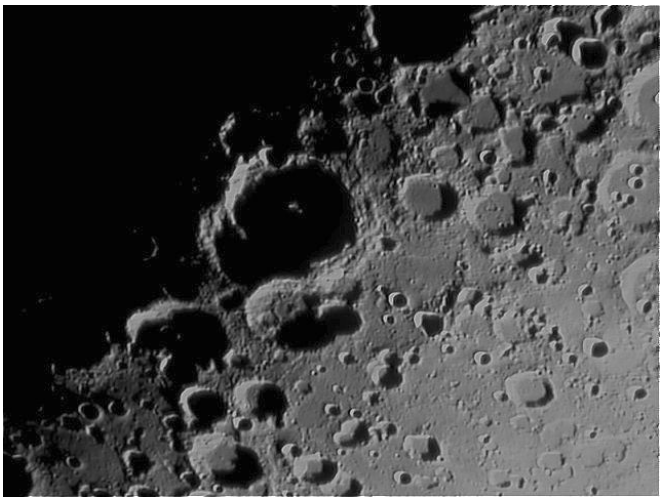
CICHUS– Jerry Hubbell, Locust Grove, Virginia, USA. December 5, 2011 01:09 UT. Colongitude 26.4º, Seeing 4/10, Transparency 5/6. 0.2m RC f/8, 2x Barlow, DMK21AU04.AS.

Cichus is located in the center of this frame with several interesting formations in the area. Hesiodus A is on the edge of the frame to the East, and you can see the Western rim of the concentric crater inside the main crater. This formation is to the South of very noticeable Rima Hesiodus I. Crater Weiss is directly to the Northeast of Cichus.

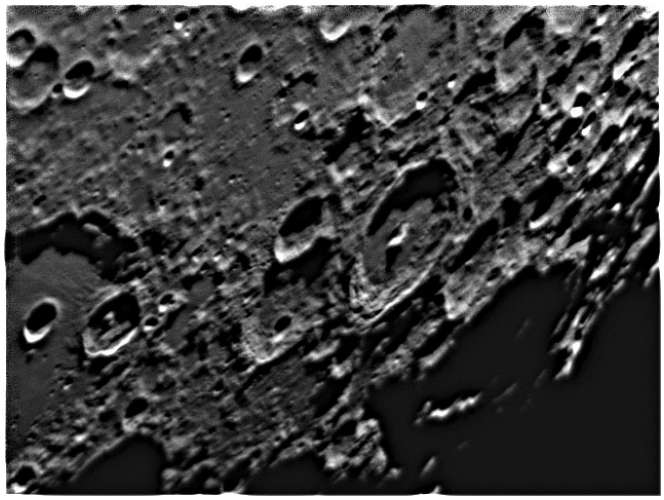
ADDITIONAL TOPOGRAPHICAL OBSERVATIONS



25 day MOON - Maurice Collins-Palmerston North, New Zealand. December 20, 2011 16:12-16:24 UT. ETX-90 SCT, LPI.



MAUROLYCUS – Ed Crandall – Lewisville, North Carolina, USA. December 1, 2011 22:56 UT. 110 mm f/6.5 APO, 3x barlow, ToUcam



MORETUS– Jerry Hubbell, Locust Grove, Virginia, USA. December 5, 2011 01:06 UT. Colongitude 26.4º, Seeing 4/10, Transparency 5/6. 0.2m RC f/8, 2x Barlow, DMK21AU04.AS.

LUNAR TRANSIENT PHENOMENA

Coordinator – Dr. Anthony Cook – atc@aber.ac.uk
Assistant Coordinator – David O. Darling - DOD121252@aol.com

LTP NEWSLETTER – JANUARY 2012

Dr. Anthony Cook - Coordinator

A happy, and observationally successful, new year to you all. Observations for November 2011 were received from the following observers: Jay Albert (Lake Worth, FL, USA) observed: Aristarchus, Marius, and Plato. Gary Beal (New Zealand) took images of the whole Moon. Maurice Collins (New Zealand) took whole disk images of the Moon Marie Cook (Mundesley, UK) observed: Alphonsus, Arzachel, Censorinus, Moltke, Mons Pico, Mons Piton, Plato, Proclus, and Ptolemaeus I observed (from Newtown, UK): Gassendi and also took time lapse video of the Moon through narrow band filters from Aberystwyth University. Kerry Koppert (New Zealand) took some whole disk images of the Moon. Steve Lang (New Zealand) imaged Mare Imbrium and took some whole disk images of the Moon. Hamish Watchman (New Zealand) also took some whole disk images of the Moon.

Routine Reports: In 1901 Oct 25 UT 22:00? Bolton (Leeds England) observed a LTP in Marius and observed with a 4.5" refractor: *"No. of light streaks on the floor. Usually none are seen"*. The 1978 Cameron catalog gives this a weight of 2. On 2011 Nov 9th, Jay Albert re-observed under the same illumination conditions and commented: *"I didn't see any light streaks on the floor. The craterlet Marius G was easily seen on the N part of the floor and another smaller, fainter craterlet was seen to its S. There was also a tiny sunlit ridge running N from the SW wall. Taken together, I thought these features might have been mistaken for a light streak in the 4.5 inch refractor used in the original observation, but that's just speculation. Basically, I saw no streaks on the floor using 232x and 336x from 01:35 to 02:03 UT*"

On 1989 Jan14, D. Holmes (Rochdale, UK) observed that Torricelli B was both dull and inconspicuous. Cameron even gives this a weight of 5. However an image mosaic of the Moon taken by Maurice Collins on 2011Nov 3rd UT 07:12-07:34 it confirms the crater it is dull at this stage in illumination. This agrees with an image mosaic that Maurice took earlier on 2011 Jul 08 UT05:25-05:54, however because the libration was different, I am going to leave the BAA/ALPO weight at a low value of 1 for now in case the viewing angle is important to Torricelli B's apparent brightness.

On 1983 Apr 21 UT 21:50-22:05 N. King (Winnersh, UK, 6 inch reflector, seeing very good, transparency good and little spurious color) observed a hint of a green tint on the shaded area on the eastern rim of the crater. The color faded as time went on. Marie Cook re-observed on 2011 Nov 04 UT21:05-21:25 and did not see any color in Plato. This LTP will remain at a weight of 2.

On 1980 Jul 24 UT02:00 F Graham (East Pittsburgh, PA, USA, 6" reflector) took some photographs (albeit slightly out of focus) that showed a bright spot on the west rim of Plato. Cameron comments that the spot was sharp compared to other features and so possibly it was a photographic defect. Furthermore the effect was not seen in a finder scope. Cameron gives the observation a weight of 2. Alas I do not have copies of the photographs concerned. However on 2011 Nov 07, Hamish Watchman and Kerry Koppert both took images of the Moon under similar illumination conditions (See Fig 1). These mimic closely what one might expect through a finder scope (at lower resolution) and through the telescope in terms of image scale. Sure enough we see a sharp bright spot on the west wall in Kerry's image, and in the lower resolution image by Hamish we do not see the spot! Now without the original photographs I cannot be sure what was seen, but I will keep the ALPO/BAA weight at a low weight of 1 for now.

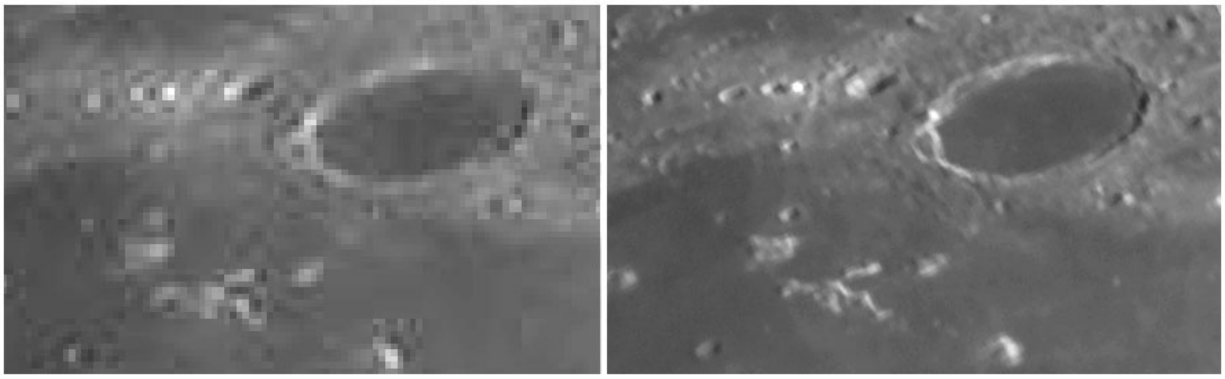


Figure 1. Plato subsets from image mosaics taken by: (Left) Hamish Watchman on 2011 Nov 07 UT 07:30-07:45. (Right) Kerry Koppert on 2011 Nov 07 UT 07:54-08:23.

LTP Reports: No LTPs were seen in November 2011. However Peter Grego emailed me about some video observations of objects crossing the Moon, videoed by Christi Matei (Romania). You can see this on: http://www.youtube.com/watch?v=EaTAekhRoJU, However I suspect that this could well be specks of dirt on the camera, or nearby optical surface, because they do not shake as much as the Moon does when the camera/scope is moved. There have been numerous sightings of objects apparently passing across the lunar disk in the past, and I mentioned another video of this type a few months ago. If you look at the velocities involved at the Moon's distance, then they must all be on our side of the atmosphere and have simple explanations.

Bill Leatherbarrow (BAA Lunar Section director) highlighted a LPOD image (http://lpod.wikispaces.com/December+2%2C+2011) which apparently showed some material above the lunar limb in an Apollo photograph. Again there have been lots of examples of this before, and almost certainly they are marks on the film or cosmic rays. Chuck Wood checked an image taken 27 seconds before and there was no sign of the material. Chuck also speculates that it is probably a photographic defect, but it might be worth checking the original photographic negatives.

Suggested Features to observe in January: The web site: http://users.aber.ac.uk/atc/tlp/tlp.htm lists repeat conditions for when a feature will exhibit the same illumination (and sometimes the same libration too) as was seen for a historical LTP observation from the past. By re-observing and submitting your observations, we will get a clear understanding of what the feature ought to have looked like at the time. Only this way can we really fully analyze past LTP reports. If you would like to join the LTP telephone alert team, please let me know your choice of contact: email or phone and when you can be contacted in UT. Alternatively you could just look out for LTP tweets on: http://twitter.com/lunarnaut. 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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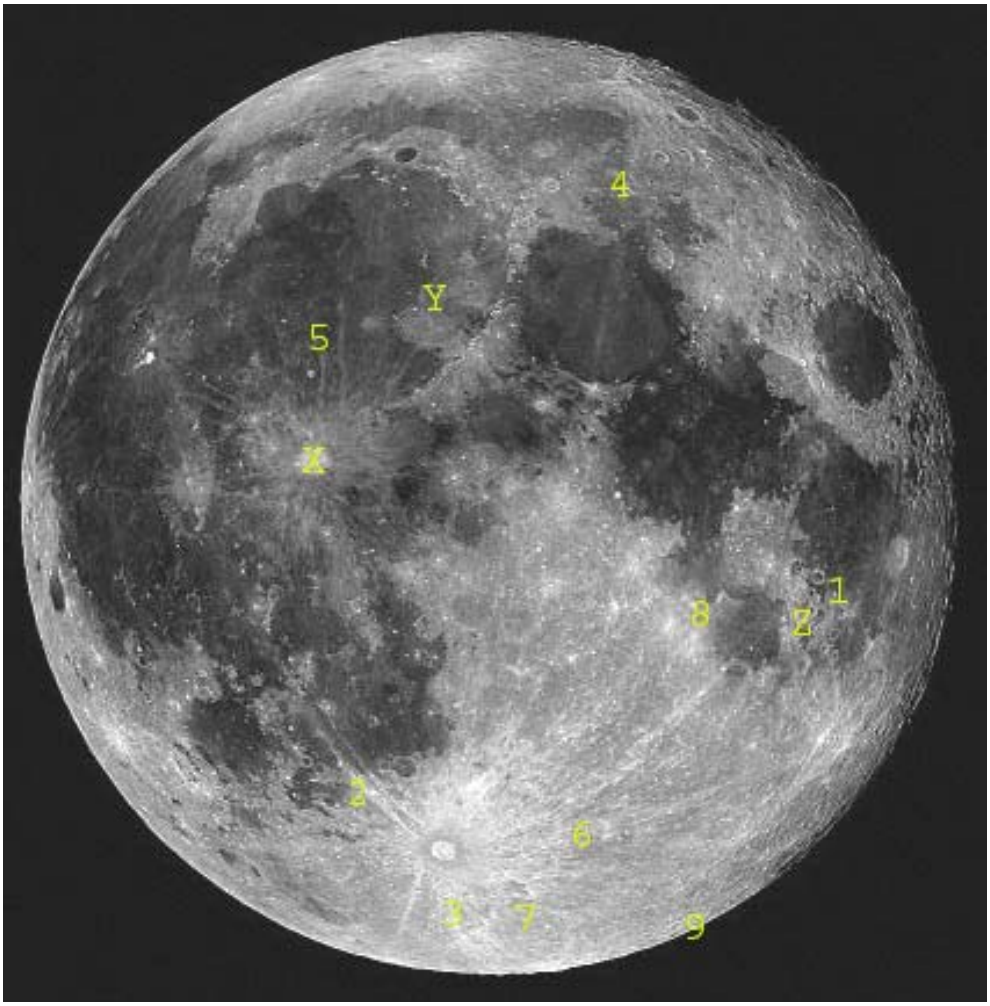
KEY TO IMAGES IN THIS ISSUE

1. **Bellot**
2. **Cichus**
3. **Clavius**
4. **Lacus Mortis**
5. **Lambert**
6. **Maurolycus**
7. **Moretus**
8. **Theophilus**
9. **Vallis Schrodinger**



FOCUS ON targets

X = Copernicus (January)
Y = Archimedes (March)
Z = Pyrenees Mts. (May)