

THE LUNAR OBSERVER

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

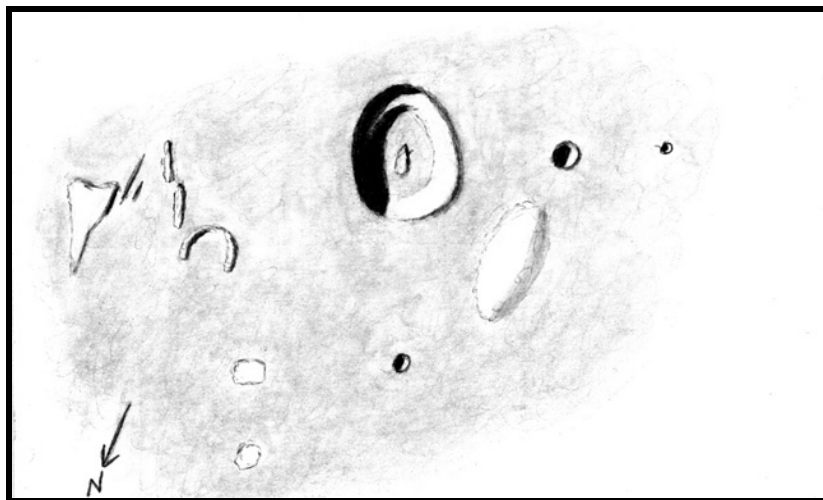
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RECENT BACK ISSUES: http://moon.scopesandscapes.com/tlo_back.html

FEATURE OF THE MONTH – JUNE 2012

Maskelyne



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

January 30, 2012 02:08-02:52 UT, 15 cm refl, 170x, seeing 8/10

I sketched this crater and vicinity on the evening of January 29/30, 2012. This area is in southern Mare Tranquillitatis. Maskelyne itself is an egg-shaped crater with what appears to be a double southern rim. There is a large peak, elongated north-south, which would be near the center if the outer southern rim is ignored. Maskelyne had substantial interior shadow at the time of observation, but modest, grayish exterior shadow. The fairly large, deep crater to the west is Maskelyne B, and Maskelyne Y is the small crater west of B. Maskelyne K is the small, crisp crater to the north. A large, low, elongated swelling lies north of Maskelyne B. It appeared as a vague strip of shadow with a modest brightening on its sunward side at the time of observation. Maskelyne R is the partial ring east of Maskelyne. This feature has fairly substantial east and west rims, a narrow south rim, and no north rim. Two bright shadowless patches are north of Maskelyne R and east of K. There are several ridges and strips of shadow east of Maskelyne R, and a low elevation that looks somewhat like a tooth with the 'root' pointing northward. Some of this detail may be associated with the ghost ring Maskelyne D which the Lunar Quadrant map shows in that area.

LUNAR CALENDAR

JUNE-JULY 2012 (UT)

June 01	01:00	Moon 6.2 Degrees SSW of Saturn
June 03	13:21	Moon at Perigee (358,482 km – 222,750 miles)
June 04	11:11	Full Moon (Partial Eclipse of the Moon)
June 04	17:06	Extreme South Declination
June 06	02:00	Moon 1.2 Degrees SSW of Pluto
June 10	01:00	Moon 5.9 Degrees NNW of Neptune
June 11	10:42	Last Quarter
June 12	18:00	Moon 1.2 Degree NNE of asteroid 2-Pallas
June 12	22:00	Moon 5.1 Degrees NNW of Uranus
June 16	01:25	Moon at Apogee (405,790 km – 252,146 miles)
June 17	06:00	Moon 1.4 Degrees NW of Jupiter
June 18	17:36	Extreme North Declination
June 18	00:00	Moon 2.1 Degrees N of Venus
June 19	15:02	New Moon (Start of Lunation 1107)
June 21	17:00	Moon 5.5 Degrees S of Mercury
June 26	11:00	Moon 5.4 Degrees SSW of Mars
June 27	03:29	First Quarter
June 28	08:00	Moon 6.1 Degrees SSW of Saturn
July 01	18:02	Moon at Perigee (362,361 km – 225,161 miles)
July 02	03:36	Extreme South Declination
July 03	13:00	Moon 0.99 Degrees SSE of Pluto
July 03	18:51	Full Moon
July 07	09:00	Moon 5.8 Degrees NNW of Neptune
July 10	04:00	Moon 5.0 Degrees NNW of Uranus
July 11	01:48	Last Quarter
July 13	16:48	Moon at Apogee (404,782 km – 251,520 miles)
July 15	02:00	Moon 0.81 Degrees WNW of Jupiter
July 16	01:18	Extreme North Declination
July 16	17:00	Moon 3.9 Degrees N of Venus
July 19	04:53	New Moon (Start of Lunation 1108)
July 24	21:00	Moon 4.0 Degrees S of Mars
July 25	17:00	Moon 5.7 Degrees S of Saturn
July 26	08:56	First Quarter
July 29	08:31	Moon at Perigee (367,317 km – 228,240 miles)
July 29	12:12	Extreme South Declination
July 30	22:00	Moon 1.3 Degrees SE of Pluto

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 nonmember 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](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.

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 be included (**Bold items are required**):

Name and location of observer

Name of feature

Date and time (UT) of observation

Size and type of telescope used

Magnification (for sketches)

Orientation of image: (North/South - East/West)

Seeing: 1 to 10 (1-Worst 10-Best)

Transparency: 1 to 6

Medium employed (for photos and electronic images)

CALL FOR OBSERVATIONS:

FOCUS ON: Bullialdus

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 **July 2012** edition will be **the crater Bullialdus and surroundings**. 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 Bullialdus to your observing list and send your favorites to:

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

Deadline for inclusion in the Bullialdus article is June 20, 2011

FUTURE FOCUS ON ARTICLES:

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

Aristillus **TLO Issue: September 2012** **Deadline: August 20, 2012**

ALPO Meeting and Call for Papers at the 2012 ALCon

The ALPO will be convening at the Astronomical League's 2012 ALCon in Lincolnshire, Illinois. Go to the ALCon website at this URL - <http://alcon2012.astroleague.org/> for details about attending the upcoming ALCon.

The ALPO intends to have its own papers sessions and ALPO Staff and members are encouraged to participate in delivering their own paper presentations concerning Solar System astronomy and related topics at these paper sessions. ALPO papers will be scheduled for Friday morning, July 6, 2012 and all day Saturday. If you wish to give a paper presentation, please submit an abstract of your paper presentation and your request for audio/visual needs to ALPO Executive Director, Julius L. Benton, Jr. at this email address: jlbaina@msn.com.

Solving the Messier Mystery

Phil Morgan.

Situated on the western half of the Mare Fecunditatis the Messier craters have remained a mystery ever since the early observers pointed their telescopes at them.

Messier is an extremely elongated crater in an east/west direction, and measures 9x13.5 kilometres along its major axis. (The oft-quoted figure of 9x11klm is patently wrong!). Whilst Messier A is elongated in a north/south direction at 13x11 kilometres.

It is generally assumed that these craters formed by single impactor that came in low (less than 5 degrees) from the east, broke up on impact, and then the fragments carried on to the west to produce Messier A and possibly the un-named crater to its west.

However, I now believe that this is an incorrect assumption. There is no evidence that any crater on the Moon produced a secondary that was actually larger than the primary impact. Most of the incoming projectiles energy would be dissipated in the first few moments of impact, and then it would be most likely to produce a mass of fragments.

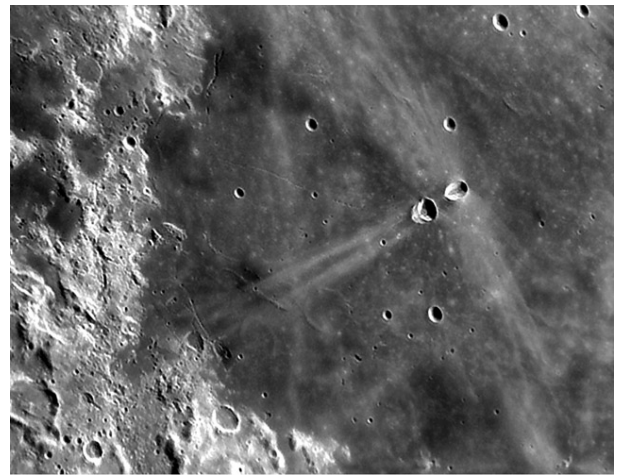
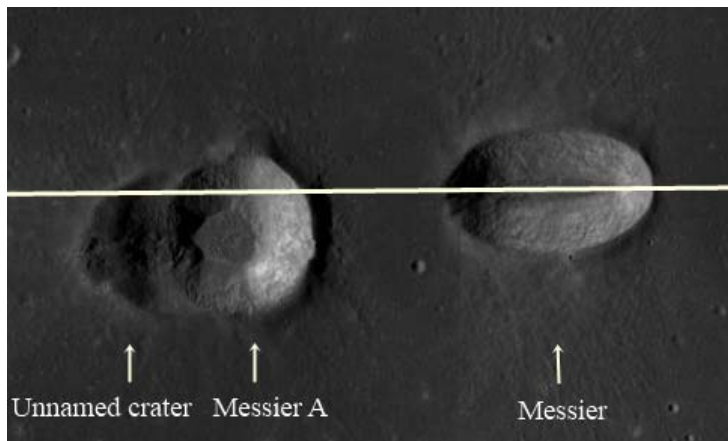
Below is a series of images that I hope will illustrate the point that I am making.

Figure 1 is an image by Paolo Lazzarotti showing the Messier ray system and what has become known as the 'Swallow'. Note, however, that the two ray systems are at

Figure 1. 'The Swallow' Image by Paolo R. Lazzarotti.

right angles to each other. This would make it extremely unlikely that both projectiles came from the same direction or at the same time.

In figure 2, a line drawn through the major axis of the Messier crater doesn't come close to continuing through Messier A. Not conclusive proof, perhaps, but it does make it less likely that any fragments carried on to the west. Figure 3 shows the slopes in the area, which also indicate the lack of alignment of the craters.



If we study the ray system of Messier, it is clear that the rays splashed out of the longer (sideways) axis (figure 4). If this was also the case with Messier A then there should be some rays that travelled back towards Messier. We should

Figure 2. A line drawn through the Messier craters major axis doesn't line up with Messier A, or with the unnamed crater to its west.

remember that Messier A is longer in its north-south direction, precisely the opposite to the Messier crater.

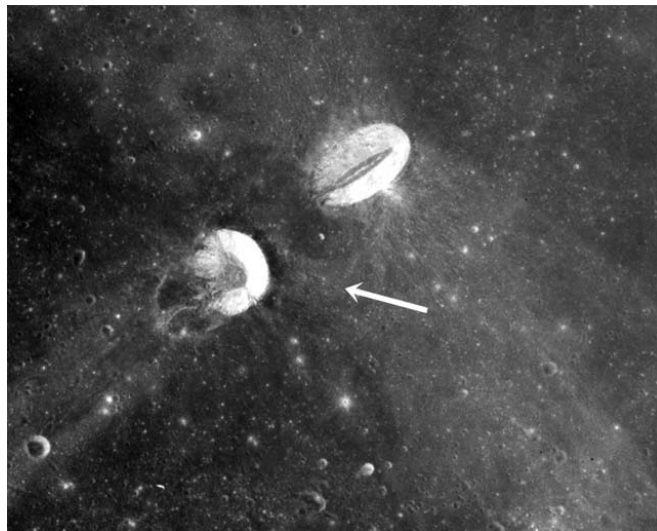
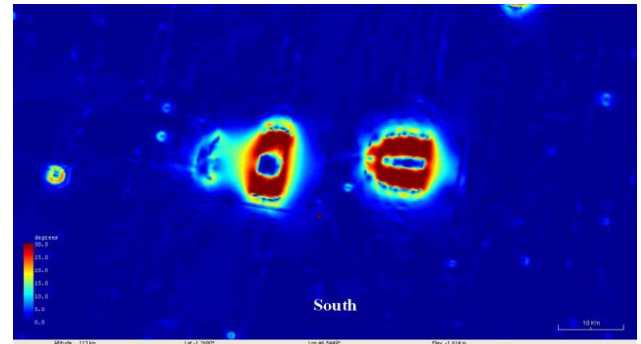
Two dark bands can be found in the interior of Messier A running up the north and south inner ramparts respectively (figure 5). This is also in precisely the opposite direction to the impact melt found on

the floor of Messier crater and would indicate that the impactor came in at a more normal trajectory, either from the north or south.

So what about the unnamed partial crater that lies beneath Messier A? Probably it was just a pre-existing crater that just happened to get in the way when Messier A

Figure 3. Slope coloured image. This highlights the difference in the alignment of Messier-to-Messier A.

was formed. Clearly it has been greatly modified. The western rampart obviously acted as a barrier to most of the central ejecta from Messier A, with ray material having been blown either side of the ramparts to produce the famous ‘comet tail’ appearance.



If the unnamed crater was the result of a ‘triple bounce’ from the original Messier impact, then it would logically be situated on top of and not underneath Messier A, (it would be the last bounce) thus indicating that it was there already.

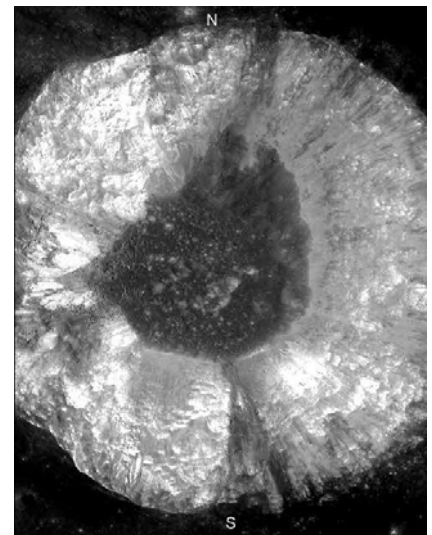
Figure 4. Some of the ray material from Messier A did indeed get ejected back to the south-east (Arrowed).

The other half of the unnamed crater lies hidden beneath Messier A. Boulders and scree now fill the western half of a crater that was once perhaps a perfectly normal looking bowl shape, and was clearly in existence before Messier A was formed.

Conclusion

It would seem very unlikely that all of the Messier craters were formed from the same meteorite nor at the same time. The most probable explanation would be that the unnamed crater to the west of Messier A was the first to be formed, followed by a grazing Messier from east, and then Messier A, which arrived at more normal trajectory either from the north or south some time later. It is possible though, that the unnamed crater is associated with Messier as a second bounce.

Figure 5. Dark banding can be seen running up both the north and south inner ramparts of Messier A.



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

STEVE BERTE. Digital images of Bullialdus (2) & Bullialdus-Clavius.

MAURICE COLLINS - PALMERSTON NORTH, NEW ZEALAND. Digital images of 3, 4, 7, 8(2), 10(3), 11, 14(2), 16, 25 day Moon, Albategnius-Hipparchus, Aristarchus, Bailly, Full Moon, Gassendi, terminator(2), and Triesneker

JOHN DUCHEK – CARRIZOZO, NEW MEXICO, USA. Digital images of Bullisaldus(2)

PETER GREGO – ST. DENNIS, CORNWALL, UK. Drawings of Encke(3)..

RICHARD HILL – TUCSON, ARIZONA, USA Digital images of Eddington, Rima Ariadaeus, Aristarchus(2), Copernicus, Darwin-Lehmann, Delambre, Gassendi, and Grimaldi-Cruger.

MIKE MATTEI – LITTLETON, MASSACHUSETTS, USA. Digital image of Mare Crisium.

PHILLIP MORGAN –LOWER HARTHALL-TENBURY WELLS, WORCESTERSHIRE, ENGLAND. Drawings of Hipparchus(2).

HONGSUN YOON –SEOUL, REPUBLIC OF KOREA. Digital image of Bullialdus.

RECENT TOPOGRAPHICAL OBSERVATIONS



BULLIALDUS – Steve Berte. February 13, 2011 01:40 UT. Seeing 4/5, Transparency 5/7. CPC 1100 SCT, afocal, 25mm eyepiece, Panasonic Lumix LX3, f/4.5, 5mm lens (24mm equivalent).

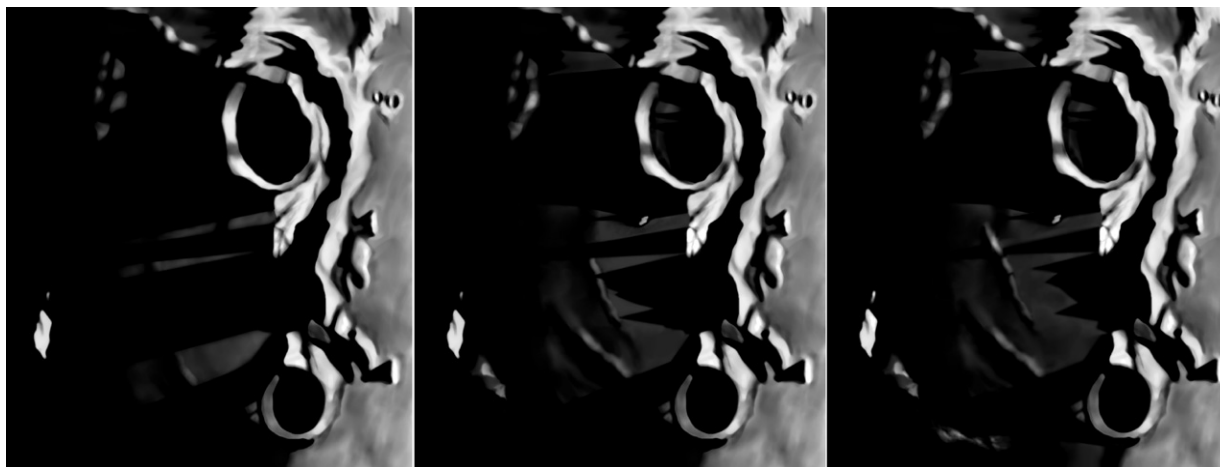
This image shows the splash from the impact forming Bullialdus very clearly in the area around Bullialdus A and B. The central peak with its shadow cast on the floor is just coming into the morning sunlight. The image also shows Kies and Kies Pi to the lower left. I was amazed that I'd never noticed how crater Lubinieszky on the other side of Bullialdus was almost a mirror image of Kies as it also had a short 'stem' attached to the crater wall giving these craters the appearance of giant hand lenses.

GASSENDI - Maurice Collins-Palmerston North, New Zealand. May 3, 2012 09:15 UT. C-8 SCT, 3x barlow, LPI.



BULLIALDUS-John Duchek-St. Louis, Missouri, USA. March 4, 2012 04:00 UT. Seeing 6/10, transparency 3/6. 8" Newtonian, f/6, 2x barlow. Canon Tli 500D. North up.

RECENT TOPOGRAPHICAL OBSERVATIONS



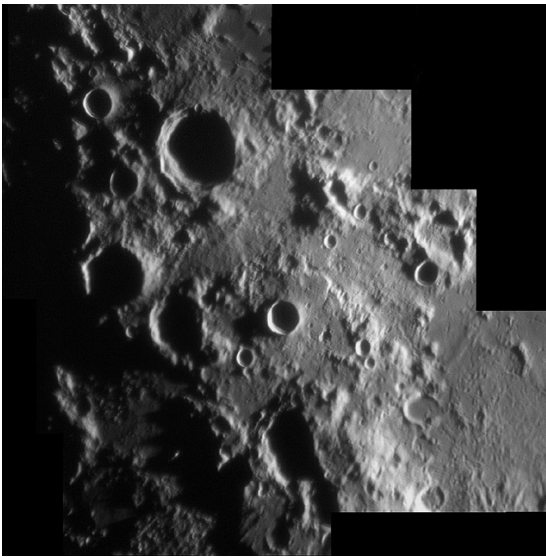
ENCKE- Peter Grego, St. Dennis, Cornwall, UK. May 1, 2012 UT. Seeing AII. 200 mm SCT, 250x, integrated light.

Time (UT. (left to right): 20:30-21:00 UT; 21:00-21:15 UT; 21:45-21:55 UT

Colongitude (left to right). 37.7-37.9°; 37.9-38.1°; 38.3-38.4°

This observational drawing sequence was made further to observational studies of Encke made on 2009 April 5 (Sun's col. 52.3-52.5°), 2009 April 6 (Sun's col. 40.2-40.5°) and 2012 March 3 (Sun's col. 39.3-39.6°). Encke was illuminated by an early morning Sun. The first observational session was occupied with making a fully-toned pencil sketch with annotations, while the second and third observational sketches were simpler annotated line drawings and show how the morning shadows had receded. During the first session, made during twilight when contrast was not as great as entirely desired, Encke appeared full of shadow except for its inner western wall. The northern section of the wall appeared dusky, while a section of the mid-part of the wall appeared 'banded' (although this was probably ill-resolved detail); the brightest part of the inner western wall lay between these two darker areas. The outer eastern glacis of Encke was illuminated and contained concentric dusky markings as well as radial marking in the north. Northwest of Encke, emerging from the shadow, was a large, ill-defined scattered cluster of hills, none of which were of great brilliance. A wedge-shaped hill south of Encke was finely detailed along its summit. The southern promontory of this hill (just for the purposes of this report, unofficially labeled 'Encke Alpha') cast a narrow, slightly tapering shadow westwards across the eastern floor of the large enclosure Encke T to the terminator, as did Encke itself; a broad eastward shadow across Encke T to the terminator was also cast by the line of hills southeast of Encke and also by the smaller crater Encke B (depicted at lower right). A brilliant, substantial peak rose into sunlight from beyond the terminator; this is a high hill, one of a number that make up the disintegrated western wall of Encke T. Several dark markings – low ridges on the floor of Encke T, were visible among the shadows. As the Sun rose higher and the shadows receded, the second session saw these ridges become better defined; two main (roughly north-south) ridges were discerned. The floor of Encke itself became visible, with a broad wedge of illumination seen in the north. The cluster of hills northwest of Encke, though still in shadow, became better defined, and further hills could be seen along the southeastern wall of Encke T. The brilliance of the aforementioned 'Encke Alpha' had grown substantially in relation to its surroundings, although whether this was due to darkening twilight or a real effect is unknown. The third session saw a further recession of shadow across the floor of Encke T, when the ridges were quite clear; the shadow cast by 'Encke Alpha' only just touched the eastern ridge, and the portion of the ridge revealed by its recession appeared fairly bright, and it too cast a shadow westward to the withdrawing terminator. A satisfactory three sessions.

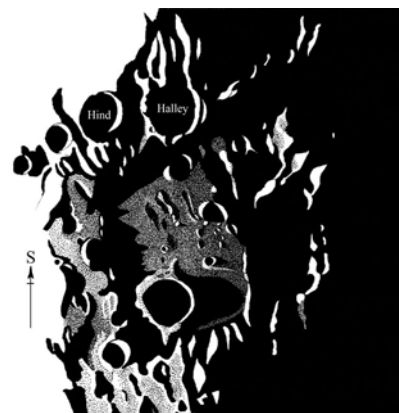
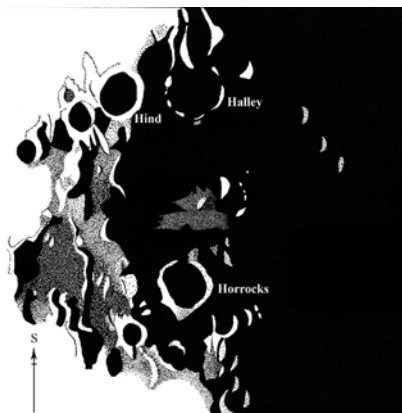
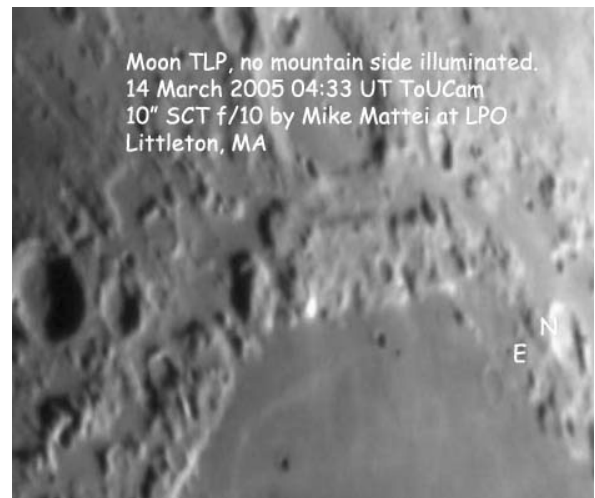
RECENT TOPOGRAPHICAL OBSERVATIONS



DELAMBRE – Richard Hill – Tucson, Arizona, USA March 29, 2012 02:19 UT. Seeing 7/10. C-14, 1.6x barlow, f17.6. DMK21AU04. Wratten 23 filter. North up.

MARE CRISIUM-Mike Mattei, Littleton, Massachusetts, USA. March 14, 2005 04:33 UT. 10" SCT, f/10. ToUCam.

I would like to comment on a image by Maurice Collins in the May issue of TLO about the tiny very bright spot in Mare Crisium North West rim it is a crater in the wall of the Mare and is very bright in the proper Lunation I have attached an image I took in March of 2005. There is a beautiful view of this spot in the Kakuya fly over of this area unfortunately it does not appear in the book. Under the right conditions this spot is very bright and a large aperture and good seeing will show more detail.

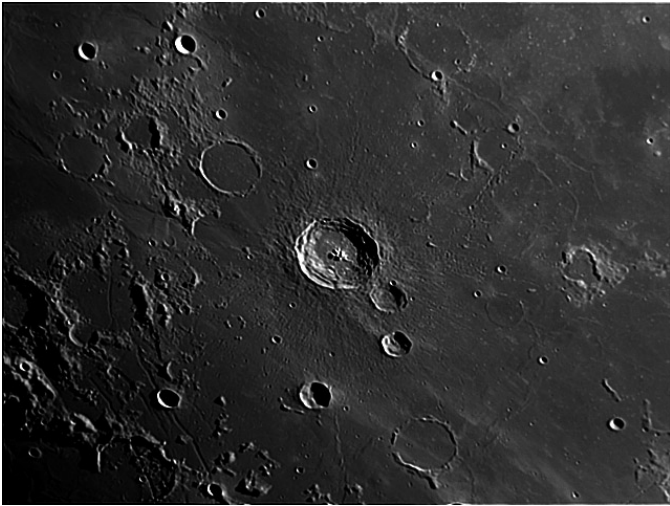


HIPPARCHUS – Phillip Morgan –Lower Harthall-Tenbury Wells, Worcestershire, England. 305 mm f/5 Newtonian, x400.

Left: March 29, 2012 19:30-20:00 UT. Seeing 5/10 Transparency 3/6. Colongitude 354.7-355.0°.

Right: January 30, 2012 18:15-18:55 UT. Seeing 7/10 Transparency 4/6. Colongitude 355.7-356.0°.

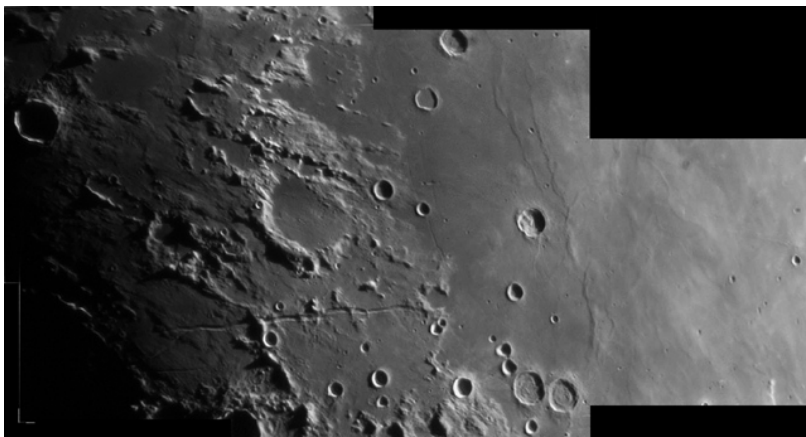
RECENT TOPOGRAPHICAL OBSERVATIONS



BULLIALDUS- Hongsun Yoon – Republic of Korea. April 24, 2010 19:32 UT. Seeing 7/10, Transparency 3/6. Mewlon 300 f/11.9 Dall-Kirham, Lumenera LU075, Astronomic G dichroic filter with IR block.

ADDITIONAL TOPOGRAPHICAL OBSERVATIONS

14 day MOON - Maurice Collins-Palmerston North, New Zealand. May 12, 2012 11:12 12:41 UT. C-8 SCT, LPI.



RIMA ARIADAEUS – Richard Hill – Tucson, Arizona, USA April 28, 2012 02:33 UT. Seeing 7/10. TEC 8" f/20 Mak-Cass. DMK21AU04. Wratten 23 filter.

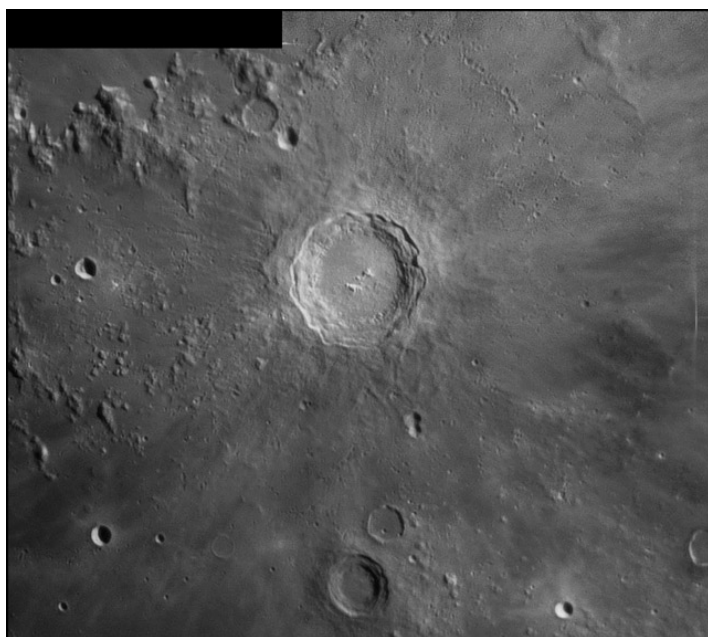
BRIGHT LUNAR RAYS PROJECT

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

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

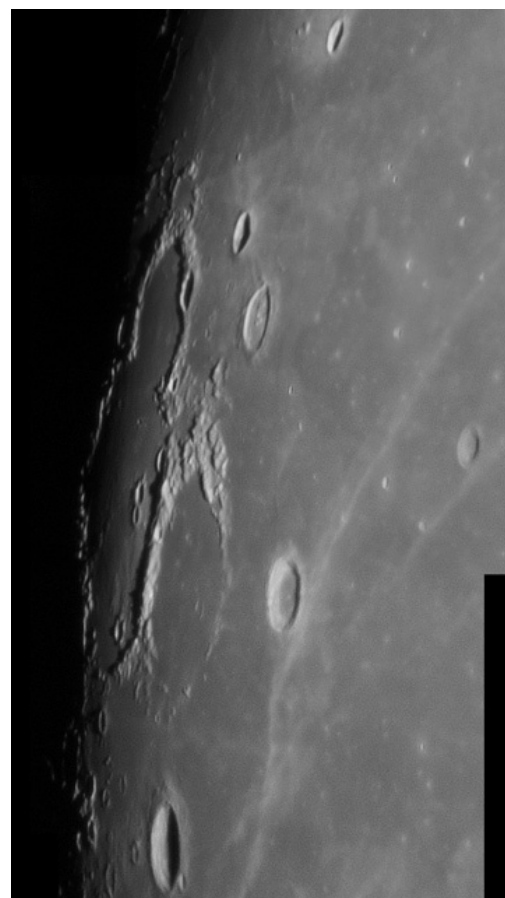
Bright Lunar Rays Website: <http://moon.scopesandscapes.com/alpo-rays.html>

RECENT RAY OBSERVATIONS



COPERNICUS- Richard Hill – Tucson, Arizona, USA May 2, 2012 03:19 UT. Seeing 7/10. TEC 8" f/20 Mak-Cass. DMK21AU04. Wratten 23 filter.

EDDINGTON – Richard Hill – Tucson, Arizona, USA May 5, 2012 05:32 UT. Seeing 7/10. TEC 8" f/20 Mak-Cass, DMK21AU04. Wratten 23 filter. North up.



LUNAR TRANSIENT PHENOMENA

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

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

LTP NEWSLETTER – JUNE 2012

Dr. Anthony Cook - Coordinator

Routine observations for April 2012 were received from the following observers, despite extensive problems with the weather this month: Jay Albert (Lake Worth, FL, USA) observed: Aristarchus, Conon, Fontenelle, Gassendi, Herodotus, Langrenus, Montes Teneriffe, Plato, and Proclus. Maurice Collins (New Zealand) took an image of Copernicus, Langrenus, Petavius, and also obtained some whole disk images of the Moon. Marie Cook (Mundesley, UK) observed: Aristarchus, Censorinus, and Posidonius. Stergios Fykatas (Austria) imaged Janssen. Richard Hill (Tucson, AZ, USA) took images of Atlas, Hercules, and Rima Ariadaeus..

News: On 2012 Mar 28 UT 21:40-21:51 Peter Grego observed a patch of light just inside the west wall of Menelaus crater on the shadowed wall/floor. This corresponded to a local solar azimuth of 88.6° and an altitude of 0.1° with respect to the crater centre and a colongitude of 343.8° . Earlier images from that night failed to show this patch, nor did a computer simulation using ALVIS (See Newsletter from last month). Brendan Shaw, has supplied me with some images taken on 2011 Apr 09 at 18:57 (Az= 89.4° , Alt= 3.1°), 19:16 (Az= 89.4° , Alt= 3.2°) and 2011 May 09 at 20:19 UT (Az= 91.8° , Alt= 9.4°). None of these show a bright spot at the position concerned, although there is some ghost inner rim production by Registax on the Mar 9th images and the west rim is quite bright. An image by Bill Leatherbarrow from 2009 Apr 01 UT 18:58 (Az= 90.4° , Alt= 6.2°) shows a spur of land projecting into the shadow, close to the site of the LTP, however this should not have been visible on 2011 Mar 28th when Peter observed, and it certainly is not visible in Brendan's images. Therefore for the moment, Peter Grego's observation will stay at a LTP weight of 3.

In the April 2012 LTP newsletter, I used a photomosaic of the Moon by Rolf Hempel that corresponded to the repeat illumination LTP from 1983 Oct 20, where Sir Patrick Moore had reported that Aristarchus was brighter than normal, and more so than Censorinus, Menelaus, and Proclus in turn. Rolf's photomosaic appeared to show that in order of brightness that the craters were sequenced:: Aristarchus (253), Menelaus (253), Censorinus (255), and Proclus (255). Rolf has since contacted me to point out that to adjust the tone mapping of the mosaic, he had had to raise the brightest craters close to saturation point (255). Furthermore the mosaic was also increased in brightness towards the limb, else darker areas would have lost contrast. He has since reexamined the original images that went to make up the mosaic and extracted more reliable brightness values, which are as follows in order increasing brightness: Menelaus (186), Aristarchus (204), Censorinus (227), and Proclus (234). So his measurements show that Aristarchus was the third brightest of these four craters, and so Sir Patrick's observation from 1983 still stands as unusual – unless of course it is a viewing angle (libration) effect, rather than just illumination. It is important to remember also that the 1983 observation was made with a Crater Extinction Device (CED) which is a visual instrument for measuring brightness using stepped dark filters to extinguish light, whereas CCD's are linearly light sensitive devices.

Routine Reports: Here are a selection of routine reports from April that were made despite the bad weather.

Aristarchus and Herodotus: On 2012 Apr 04 UT 04:20-04:50, Jay Albert observed using a C11 (transparency 3rd magnitude) under the same illumination conditions to the two past LTP listed below:

Herodotus 1950 Jul 27 UTC 03:56 Observed by Bartlett (Baltimore, MD, USA) described in the NASA catalog as: "Pseudo c.p. in Herod. Drawings. (Similar to NASA catalog event #523)" 5" reflector used at x100, NASA catalog weight=4 (high).

Aristarchus 1963 Oct 30 UTC 01:50-02:15 Observed by Greenacre and Barr (Flagstaff, AZ, USA) described in the NASA catalog as: "Ruby-red spots, brilliant, sparkle, movement. Pink on rim later violet 3h later..NASA catalog weight=5.

Jay comments..."Aristarchus [778, by Greenacre]- The Moon moved over my roof and seeing dropped to 5/10, making me go from 400x to 311x. I saw no *ruby-red spots* sparkling in or around Aristarchus and no pink or violet glow. I did see good detail on the crater, including terracing, the central peak and vertical bands on the interior walls."

"Herodotus [no ID#, by Bartlett and similar to #523]- I observed the *pseudo central peak*. It does not appear to be a peak, but a slight, smooth and gradual elevation of the floor S of the crater's center. I've seen this before.

I observed Aristarchus and Herodotus in the same field at 400x and 311x from 04:20 to 04:50UT".

Censorinus: On 1991 May 24 Marie Cook found the apron region outside the crater to be a very dull grey, and not diffuse, She re-observed again, under similar illumination, on 2012 Apr 01 UT 21:25-21:30, and again 22:00-22:10 and found the crater to be normal. The usual white spot was seen, and the apron was white and definitely diffuse. As this was at odds with the 1991 LTP description given by Cameron's catalog, it infers that either viewing angle has some effect, or that it was a genuine LTP.

Plato: On 1965 Oct 12 UT Hibbard (2.5 inch refractor) found that Plato had a bluish tinge, but the photographs obtained were a bit out of focus and Cameron considers chromatic aberration as a possible cause. On 1975 Feb 27 UT 21:26-23:32 Foley, using a Moon blink device, found that the crater was brighter in blue than in red light in a region along the inside of the crater from SSE-W. Foley describes this area as diffuse too. An image mosaic obtained by Maurice Collins on 2012 Apr 8 UT 09:20-09:43, more or less has the same illumination conditions as these past LTP. Therefore if the 1965 TLP was a natural color effect then at the

affected part of the crater should appear blue in a color saturated sub-set of the mosaic (see Figure 1). As you can see though there is no sign of any blue, thus this suggest that the effect seen in the previous two LTP reports were not due to natural surface color..

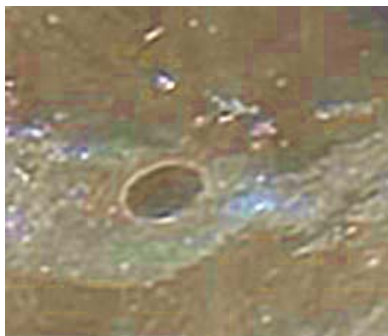


Figure 1. Section of a whole Moon mosaic by Maurice Collins, centred on Plato. North is towards the top and the mosaic has undergone saturation at 85%, enhancing the reds and the blues.

LTP Reports: One potential candidate LTP was reported during April, although as we shall see this turned out not to be a LTP. On 2012 Apr 10 at 01:49 UT, Stergios Fykatas of Vienna, Austria, imaged Janssen (seeing 5/10, SCT 203 mm f/10, Baader IR-Pass filter) and found that the area between Janssen K and Rimma Janssen was somewhat lacking in detail (See figure 2 (left)). The appearance was checked over the 5 minutes of video obtained and it remained the same. Stergios checked other images that he could find on line and in general saw at least some detail in this region, which he could not detect in the April 10th image. Was this a possible obscuration that astronomers have seen from time to time in other craters? Stergios re-imaged the area again on April 27th, under different illumination, and in daylight (See figure 2 (right)), but using the same telescope, and obtained a similar lack of detail effect in this region. Therefore the most likely cause is that the area has little detail anyway and only telescopes larger than 20 cm, with appropriate image scales, are likely to resolve this. Therefore the original observation turned out not to be a LTP. It is probably a former lava flooded area. I would like to thank Stergios for bringing this to my attention, and feel that telescope resolution effects may account for at least some of the obscuration LTP seen in the past.

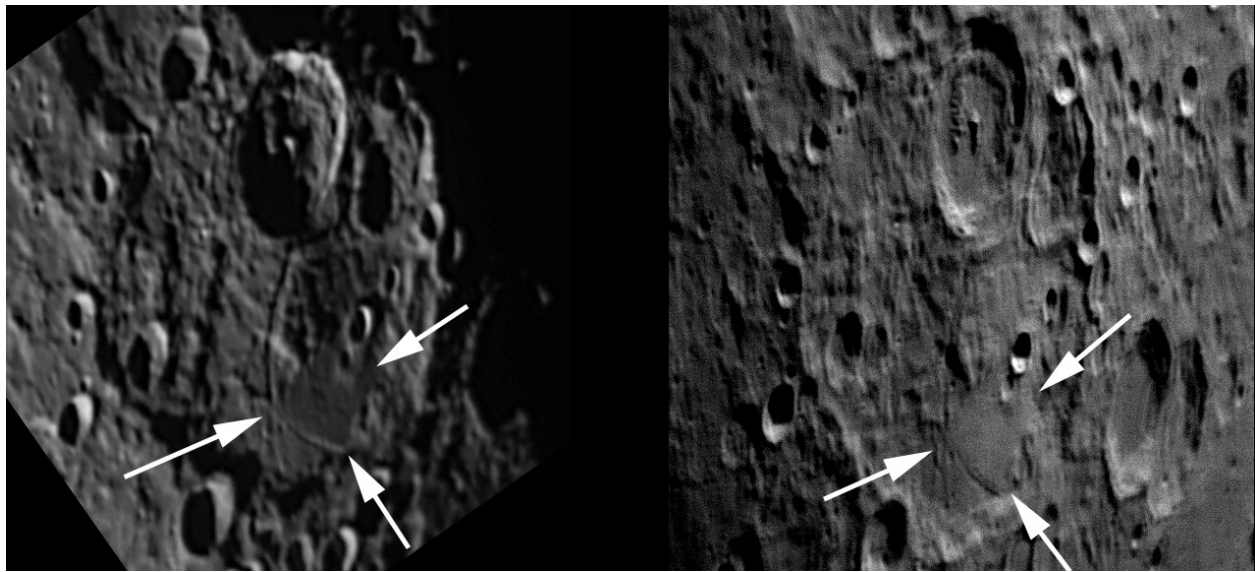


Figure 2 Smooth low texture area in Janssen crater indicated by arrows. North is towards the top.
(Left) 2012 Apr 10, seeing 5/10, 203 mm SCT, Baader IR-pass. **(Right)** 2012 Apr 27 UT 14:12 seeing 4/10, 203 mm SCT, Baader IR-pass.

Suggested Features to observe in June: For repeat illumination (only) LTP predictions for the coming month, these can be found on the following web site: <http://users.aber.ac.uk/atc/tlp/tlp.htm> . 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 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! Twitter LTP alerts can be accessed on <http://twitter.com/lunarnaut>.

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KEY TO IMAGES IN THIS ISSUE

1. Copernicus
2. Delambre
3. Eddington
4. Encke
5. Gassendi
6. Hipparchus
7. Janssen
8. Mare Crisium
9. Maskelyne
10. Messier
11. Plato
12. Rima Ariadaeus

FOCUS ON targets

X = Bullialdus (July)

Y = Aristillus (September)

