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THE LUNAR OBSERVER

A PUBLICATION OF THE LUNAR SECTION OF THE A.L.P.O.
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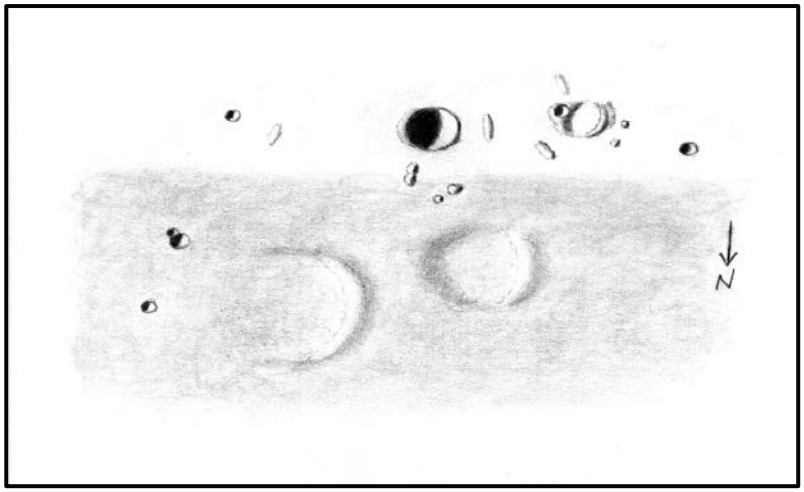
17 Autumn Lane, Sewell, NJ 08080
RECENT BACK ISSUES: http://moon.scopesandscapes.com/tlo_back.html

FEATURE OF THE MONTH – SEPTEMBER 2014

PLATO H



Sketch and text by Robert H. Hays, Jr. - Worth, Illinois, USA
April 9, 2014 02:01-02:25 UT, 15 cm refl, 170x, seeing 7-8/10

I sketched this crater and vicinity on the evening of April 8/9, 2014. This crater is well to the northeast of Plato and just south of Mare Frigoris. Plato H is a modest, symmetric crater with substantial interior and exterior shadowing. It appears to be quite deep. A loose group of four peaks is north of Plato H, and a short ridge is just to its west. A rather vague ring, nearly as wide as Plato H,is to the west. A small, deep pit is on the east side of this ring, and several small elevations are nearby. Another small, deep pit is farther west. A line of at least three small craters is east and northeast of Plato H. Archytas G in the middle is the largest of this group, and also appears to be double. Archytas L is north of G. A small peak is west of the unlabeled crater south of Archytas G. A large, vague, very shallow ring is north of Plato H, and an even larger vaguer, partial ring is between this feature and Archytas G and L. These rings showed slightly brighter sun-facing slopes, and weak shadowing that may be too conspicuous on the sketch. I have to wonder if these are the remnants of flooded craters. The southern edge of Mare Frigoris is fairly well-defined in this area. It passes south of Archytas G, through the group of peaks north of Plato H, and north of the detail to the west.

LUNAR CALENDAR
SEPTEMBER-OCTOBER 2014 (UT)

Sep	02	11:11	First Quarter
	03	13:10	Moon South Dec.: 18.6° S
	08	03:29	Moon Perigee: 358400 km
	09	01:38	Full Moon
	11	07:32	Moon Descending Node
	15	01:01	Moon-Aldebaran: 1.5° S
	16	02:05	Last Quarter
	16	05:15	Moon North Dec.: 18.6° N
	20	14:22	Moon Apogee: 405800 km
	24	06:14	New Moon
	25	17:41	Moon Ascending Node
	26	00:48	Moon-Spica: 2.8° S
	26	09:32	Moon-Mercury: 4.6° S
	28	04:46	Moon-Saturn: 0.8° S
	30	19:29	Moon South Dec.: 18.5° S
Oct	01	19:33	First Quarter
	06	09:41	Moon Perigee: 362500 km
	08	10:51	Full Moon
	08	10:55	Total Lunar Eclipse
	08	17:44	Moon Descending Node
	12	09:58	Moon-Aldebaran: 1.4° S
	13	13:34	Moon North Dec.: 18.5° N
	15	19:12	Last Quarter
	18	06:05	Moon Apogee: 404900 km
	23	00:46	Moon Ascending Node
	23	21:45	Partial Solar Eclipse
	23	21:57	New Moon
	25	16:04	Moon-Saturn: 1.1° S
	28	01:03	Moon South Dec.: 18.5° S
	31	02:48	First Quarter

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.alpo-astronomy.org.** 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:

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

Full resolution images are preferred-it is not necessary to compress, or reduce the size of images. *Additional commentary accompanying images is always welcome.* **Items in bold are required. Submissions lacking this basic information will be discarded.**

Digitally submitted images should be sent to both

Wayne Bailey – wayne.bailey@alpo-astronomy.org
and Jerry Hubbell –jerry.hubbell@alpo-astronomy.org

CALL FOR OBSERVATIONS: FOCUS ON: GHOST CRATERS

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 **November 2014** edition will be **Ghost Craters.** 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 this to your observing list and send your favorites to (both):

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

Jerry Hubbell –jerry.hubbell@alpo-astronomy.org

Deadline for inclusion in the Ghost Craters article is October 20, 2014

FUTURE FOCUS ON ARTICLES:

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

Subject	TLO Issue	Deadline

FOCUS ON: ALTAI SCARP

By Wayne Bailey

Coordinator: Lunar Topographical Studies

The Altai Scarp (Rupes Altai) marks the southwestern section of Mare Nectaris' outer ring (Fig. 1). Under a rising sun, it's easily visible as a bright arc extending from Tacitus, west of Catharina, to Piccolomini. Except for the grand trio of craters, Theophilus, Cyrilus and Catharina (Fig. 2), this area seems to be neglected by observers. This is unfortunate, since the Nectaris Basin, with only its central portion flooded by small, shallow Mare Nectaris, is the best exposed basin on the near side (Fig. 3). Mare Orientale displays its structure better, but, even with the most favorable libration, it is not easily interpreted by earthbound observers. The other nearside basins are more deeply flooded so their structure is hidden.

FIGURE 1. LOCATION OF THE ALTAI SCARP. *Maurice Collins-Palmerston North, New Zealand. August 1, 2014 05:06-05:17 UT. C-8. North down*

Unlike the elevated mountains rimming Mare Imbrium, or even the Pyrenees Mountains on the east side of Mare Nectaris, the Altai Scarp doesn't rise significantly above the terrain to its west. This is evident from the lack of shadows behind the scarp as the sun rises (Fig. 4). It is a cliff, formed by a downward shift of the basin floor to its east. When the terminator is near, around days 5.5 and 19 of the lunation, it is easily visible as a bright (before full) or dark (after full) line. Near full moon it is more difficult to identify, but can still be located (Fig. 5).

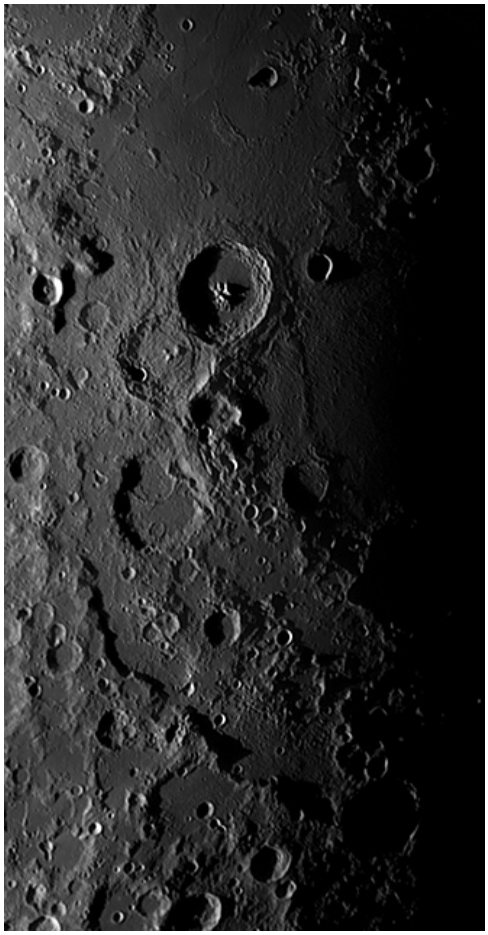
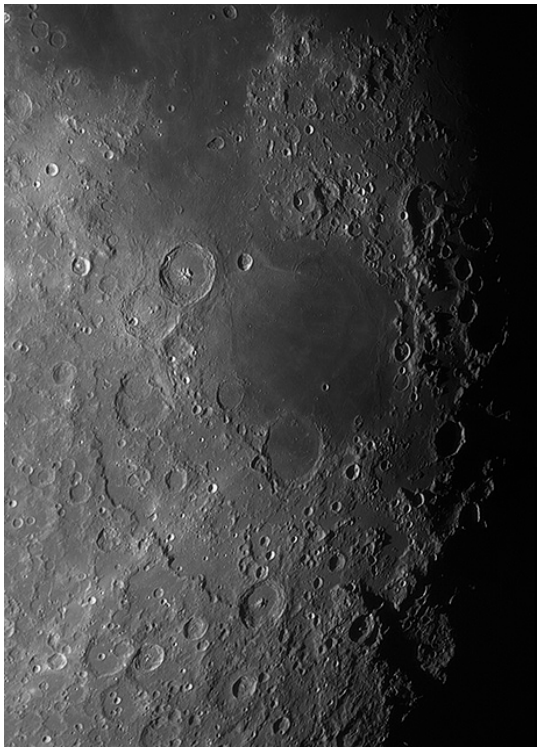


FIGURE 2. TACITUS TO PICCOLOMINI. *Howard Eskildsen-Ocala, Florida, USA. May 22, 2011 10:21 UT. 2x Barlow.*

With a bit more effort, the Altai ring can be traced northward from Tacitus through Kant to Hypatia (Fig. 6), and eastward past Piccolomini to Borda (Fig. 7). Extrapolating an 860 km diameter circle, this ring would continue past Cook, Goclenius, and Rimae Goclenius and Gutenberg (Fig. 3). The Pyrenees Mountains mark the eastern side of a 400 km diameter ring that nearly coincides with the 350 km diameter Mare Nectaris. An even smaller inner ring may be marked by wrinkle ridges on the mare, and ridges near Cyrilus and Santbach may be the remains of still another ring.

Piccolomini, at the southern end of the scarp, is an interesting crater to examine in detail (Fig. 8). It has a large, complex central peak. The interior walls are terraced, but also appear somewhat smoothed by erosion. The floor is smooth with only a few small features visible. A chain of overlapping craters extends from the

north wall, and the external highlands seem to intrude through the southern wall. It sits astride the Scarp but seems unaffected by it.

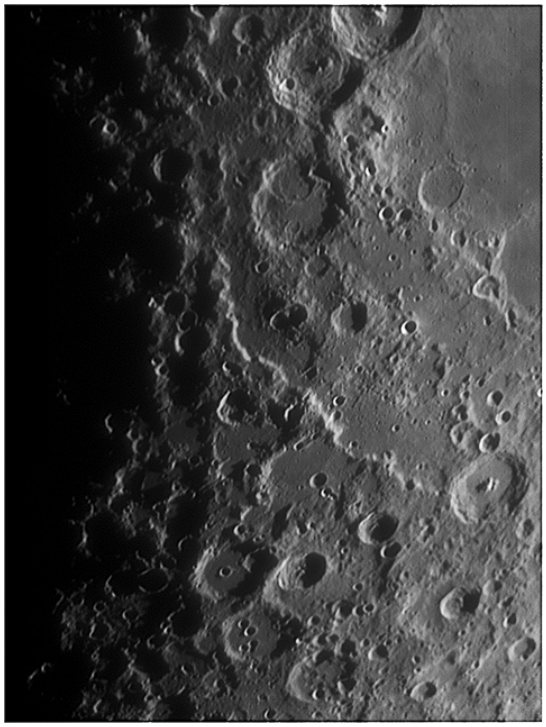


A curiosity that Michael Sweetman pointed out in his image (Fig. 9), and was also the subject of an article in Sky & Telescope by Thomas Dobbins (Dobbins, 2013) is Larrieu's Dam. Visible for about a day around 6 days after new moon, this appears as a bright narrow line, southwest of Polybius, near the base of the Altai Scarp. As the sun rises, it is revealed

FIGURE 3 ***NECTARIS BASIN*** *Howard Eskildsen- Ocala, Florida, USA. October 18, 2008 04:17-04:23 UT. Seeing 5/10, Transparency 4/6. Meade 6" Refractor f/8 2x Barlow, Orion Starshoot II..*

to be the straight rim of the D shaped crater Polybius K (Fig. 10). According to Dobbins, this illusion was first reported in 1955. Since it's visible for at least a full day in every lunation, it makes me wonder how many other eye-catching features remain to be noticed on the moon.

Tacitus, at the northern end of the scarp (Fig. 10), also merits closer attention. Although smaller than Piccolomini and lacking a prominent central peak, its terraced walls present a wealth of intricate detail.



A segment of a large, bright ray from Tycho crosses perpendicular to the scarp and brushes the western edge of Fracastorius at the edge of the mare (Figs. 5 & 7).

The large crater Fracastorius presents an easily recognized outline with its missing mare-ward wall. It formed on the sloping floor of the basin and was subsequently flooded by mare lava. Under a high sun, the missing wall segment seems to be

FIGURE 4. ALTAI SCARP. *Howard Eskildsen-Ocala, Florida, USA. August 16, 2010 00:31 UT. Seeing 6/10, Transparency 2/6. 6" f/8 refractor, Explore Scientific lens, 2x barlow, DMK 41AU02.AS, no filter.*

outlined by lighter colored mare surface. The missing segment appears to have been removed, not simply buried, since the walls end abruptly. They don't merely disappear under the surface. Compare this to nearby Beaumont which still retains traces of its seaward wall (Fig. 6).

In fact the entire Nectaris basin presents a similar appearance. The ring structure is most obvious and best preserved in the southwest quadrant and essentially missing to the northeast. It appears that Nectaris formed on the edge of the pre-existing Fecunditatis and Tranquilitatis basins.

This can be a very rewarding area to examine carefully. Beyond the Theophilus, Cyrilus, Catharina trio, the impressive arc of the Altai Scarp, and the curious appearance of Fracastorius, study the details of the scarp. Study the interiors of the craters, and try not to neglect the phases after full moon. The highlands

southwest of the scarp can be a challenging area to navigate. Its bewildering expanse of crowded craters is an excellent area to develop your ability to identify features.

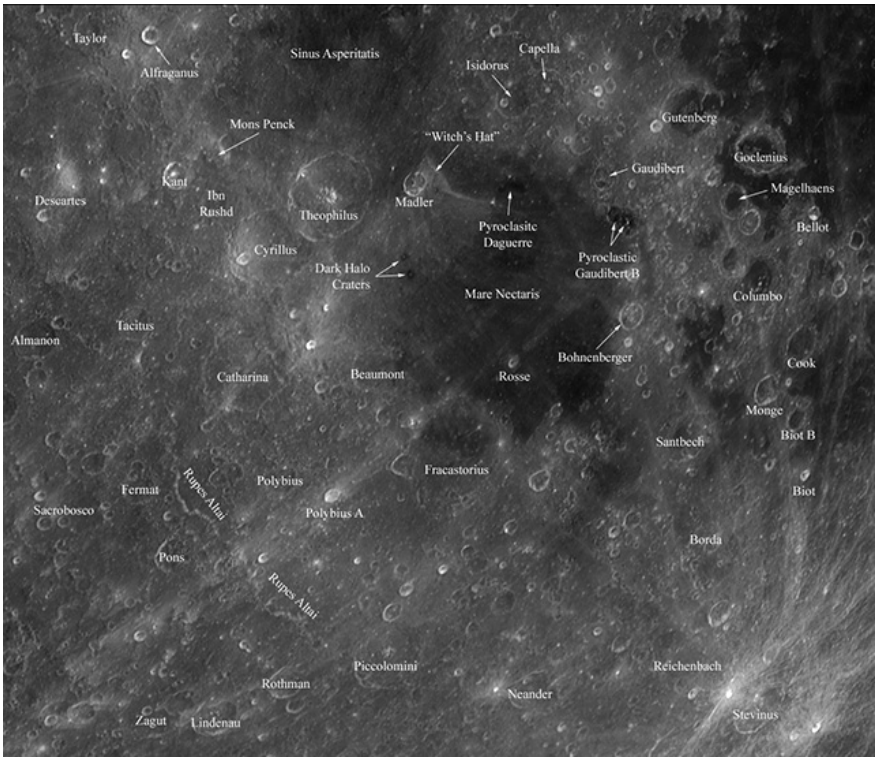


FIGURE 5. ALTAI SCARP REGION.
Howard Eskildsen-Ocala, Florida, USA.
July 12, 2011 01:32 UT.

FIGURE 6. ALTAI SCARP NORTHERN EXTENSION. *Howard Eskildsen-Ocala, Florida, USA. August 03, 2013 00:24 UT. Seeing 6/10, Transparency 5/6. Meade 6" f/8 refractor, 2x barlow, Orion Starshoot II.*

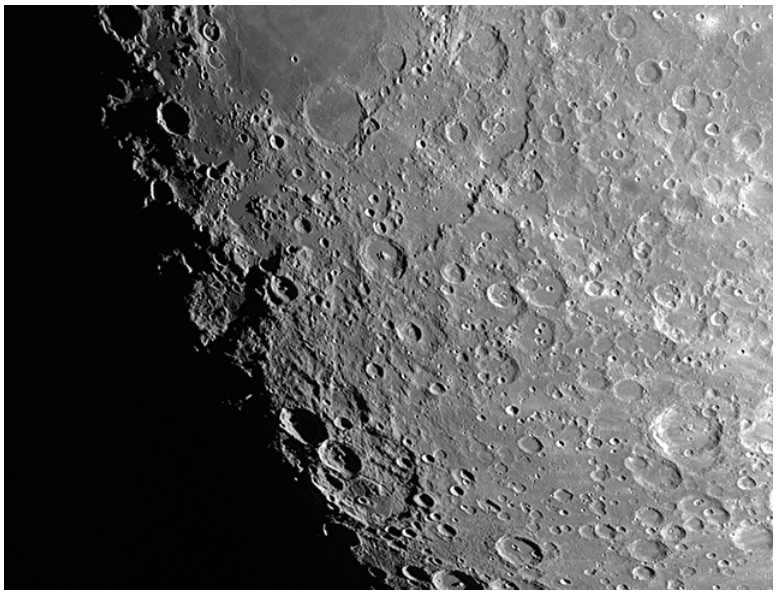


FIGURE 7. ALTAI SCARP SOUTHEAST EXTENSION. *David Teske, Starkville, Mississippi, USA. August 14, 2014 08:48 UT. Seeing 5/10. Questar 89mm Mak, Skyris 445M. West right.*

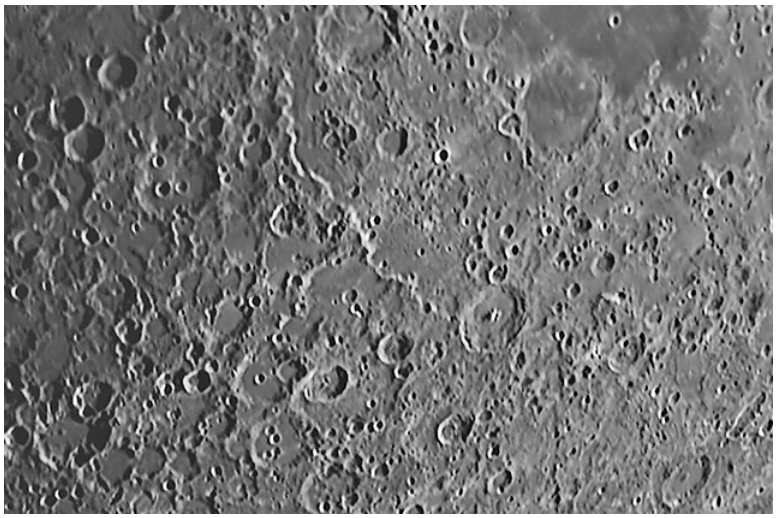


FIGURE 8. HIGH SUN ON ALTAI SCARP. *William Dembowski, Windber, Pennsylvania, USA. October 25 2009 23:14UT. Colongitude 359.4º, Seeing 5/10. C9.25 SCT f/10, DMK41, UV/IR filter.*

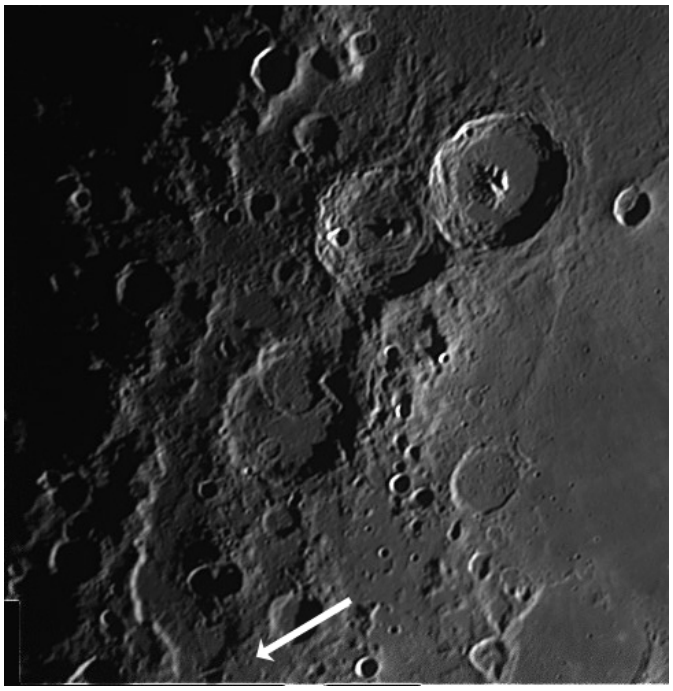


FIGURE 9. LARRIEU'S DAM. *Michael Sweetman, Tucson, Arizona, USA, December 31, 2011 02:59 UT. Colongitude 343.3º. 4" refractor, f/20. DMK21, IR cutoff filter.*

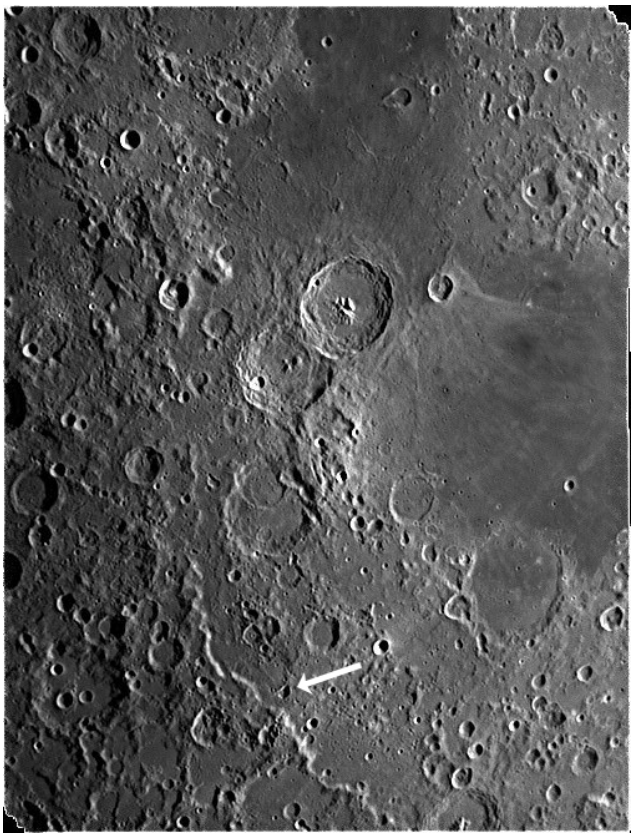


FIGURE 10. POLYBIUS K. *Michael Sweetman, Tucson, Arizona, USA, January 19 2013 04:41 UT. Seeing 3-4/10, Transparency 3/6. Colongitude 357.1º. 6" Mak, f/12.. DMK21, Astronomik IR-pro 742 filter.*

ADDITIONAL READING

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

LUNAR TOPOGRAPHICAL STUDIES

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

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

Assistant Coordinator – Jerry Hubbell – jerry.hubbell@alpo-astronomy.org

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

OBSERVATIONS RECEIVED

JAY ALBERT – LAKE WORTH, FLORIDA, USA. Digital image of Petavius.

MAURICE COLLINS - PALMERSTON NORTH, NEW ZEALAND. Digital images of 5, 8, 9, 10, 12(2) & 13(2) day Moon, Alphonsus, Aristarchus(2), Bailly, Bode, Clavius(2), Copernicus, Eddington, Grimaldi, Kepler, Mare Humorum, Mare Vaporum, Sinus Aestuum & Tycho(2).

WILLIAM DEMBOWSKI – WINDBER, PENNSYLVANIA, USA. Digital image of Altai Scarp.

HOWARD ESKILDSEN - OCALA, FLORIDA, USA. Digital images of Altai Scarp(2), Aristillus, Hadley Rille, Linné & Mare Nectaris(3).

RICHARD HILL – TUCSON, ARIZONA, USA. Digital images of Alpine Valley-Cassini, Bullialdus, Copernicus-Eratosthenes, Fra Mauro, Hadley Rille, Schiller, South Pole, Ptolemaeus-Arzachel & Wilhelm.

MICHAEL SWEETMAN – TUCSON, ARIZONA USA. Digital images of Altai Scarp-Larrieu's Dam(2).

DAVID TESKE-STARKVILLE, MISSISSIPPI USA. Digital image of Altai Scarp.

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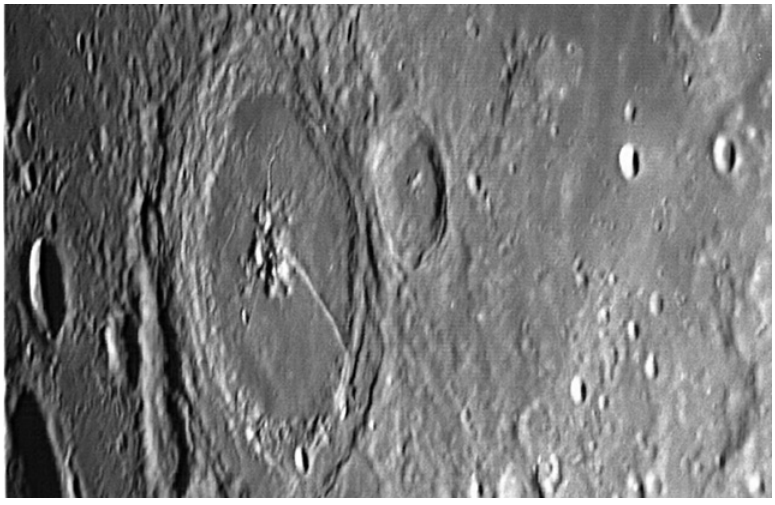
RECENT TOPOGRAPHICAL OBSERVATIONS

PETAVIUS - Jay Albert, Lake Worth, Florida USA. August 12, 2014 05:05 UT. Seeing 5/10 Transparency 2/6. C-11 SCT, NexImage 5.



RECENT TOPOGRAPHICAL OBSERVATIONS

BAILLY - Maurice Collins-Palmerston North, New Zealand. August 9, 2014 08:24 UT. C-8. North down.

RIMA CALIPPAS-LINNÉ - Howard Eskildsen-Ocala, Florida, USA. August 16, 2014 10:48 UT. Seeing 7/10, Transparency 4/6. Mewlon 250, 1.5x Barlow, IR block filter, DMK 41AU02.AS.

At the top right of this image Rima Calippus arcs across the NW corner of Mare Serenitatis. The southern Caucasus mountains are on the upper right and Rima Theaetetus arcs along the upper left margin of the photo. Near the left center of the photo a shield volcano known as Valentine dome (AKA Linne A 1) casts a curved shadow along its eastern flank. Further to the south the tiny, elusive Linne crater pocks Mare Serenitatis in the center of bright ejecta. Various wrinkles and small craters mark the dark basalts of western Serenitatis.

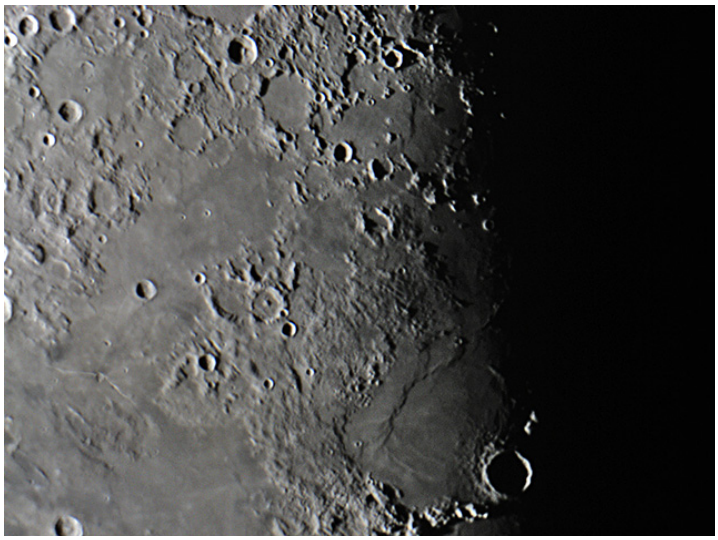
WILHELM – Richard Hill – Tucson, Arizona, USA May 9, 2014 03:42 UT. Seeing 8/10. TEC 8" f/20 MAK-CASS, SKYRIS 445. 656.3 nm filter.

This gorgeous chaotic terrain begged to be imaged on this night. Wilhelm is the crater just below and to the right of center. Tycho's wall can be seen on the extreme right edge of the image. The large crater at bottom with the dramatic shadows on it's floor, is Longomontanus. On the terminator above center is the shadow filled crater Capuanus and above this is Palus Epidemiarum. This shadow filled view of Capuanus is a fleeting thing since this is such a shallow crater and quickly is flooded by sunlight.

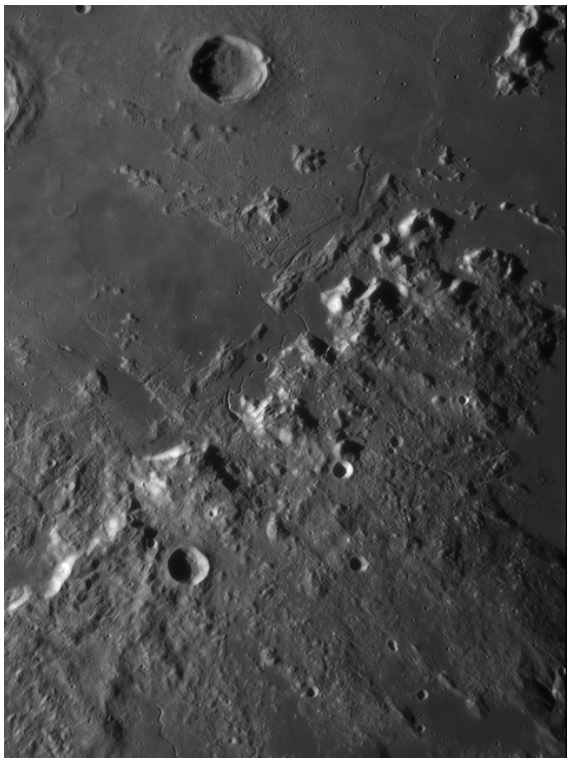
Running between Capuanus and Pitatus, the crater in the upper right corner, is Rima Hesiodus. Notice that many of the older craters and features below Palus Epidemiarum are softened by a layer of ejecta laid on during the formation of Mare Nubium just above this image. Notice Rima Pitatus running along the inside of the wall of the crater.

ADDITIONAL TOPOGRAPHICAL OBSERVATIONS

GRIMALDI- Maurice Collins- Palmerston North, New Zealand. August 9, 2014 08:24 UT. C-8 SCT. North down.



SINUS AESTUUM - Maurice Collins- Palmerston North, New Zealand. August 4, 2014 09:14 UT. C-8 SCT. North down.



HADLEY RILLE - Howard Eskildsen-Ocala, Florida, USA. August 16, 2014 10:54 UT. Seeing 7/10, Transparency 4/6. Mewlon 250, 1.5x Barlow, IR block filter, DMK 41AU02.AS.

ADDITIONAL TOPOGRAPHICAL OBSERVATIONS

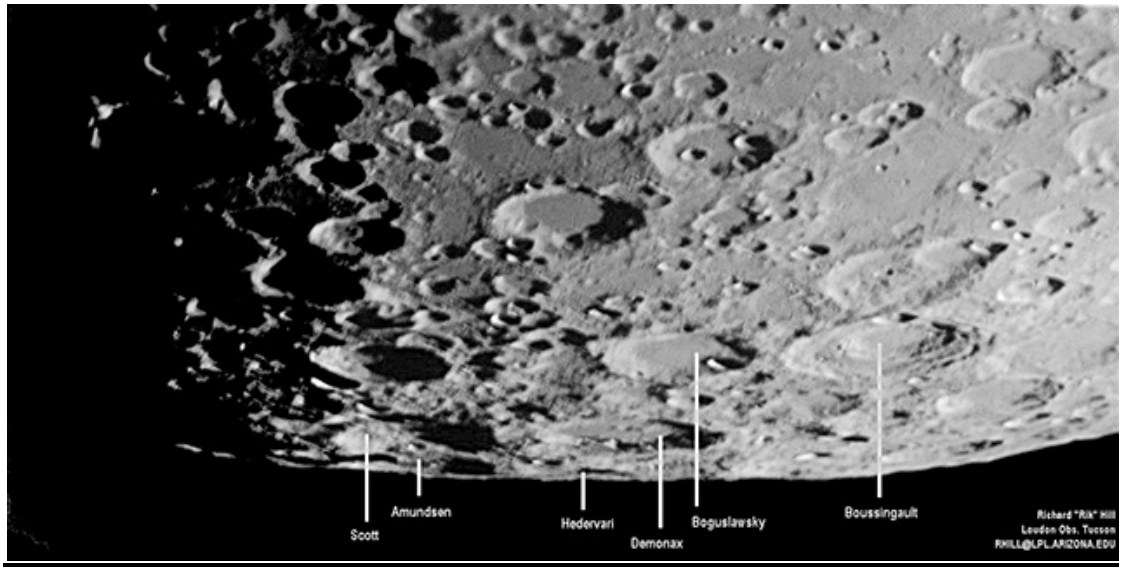
WANING CRESENT - Howard Eskildsen-Ocala, Florida, USA. August 23, 2014 10:50 UT. Seeing 7/10, Transparency 4/6. Orion 80 ED refractor, 2x Barlow, DMK 41AU02.AS.

HADLEY RILLE (Apollo 15 landing site) – Richard Hill – Tucson, Arizona, USA May 22, 2010 01:42 UT. Seeing 8/10. C-14 SCT, 2x barlow, f/22, DMK21AU04. UV/IR blocking filter.

If you follow lunar events, then you know this is the 50th anniversary of the Ranger 7 impact on the moon. But did you know this is also the 43rd anniversary of the landing of Endeavor, the Apollo 15 mission? This was also known as the famous "Hadley Rille" landing site and of all the Apollo landing sites, this one is probably the easiest to find. The rille, now known as Rimae Hadley is nestled up against the Montes Apenninus in Palus Putredinus near the large crater Archimedes. This image shows the area as I saw it in 2010 on a pretty good night. Rima Hadley is obvious and the small arrow indicates the location of the landing site itself. There's a 6km crater just about in the middle of the rima called Hadley C. The crater on the right side is the 10km crater Aratus. On the left bottom you can see the nearly verticle Rima Bradley which separates Montes Apenninue and Montes Archimedes. In the upper left there's a few similar cracks known as Rimae Fresnel. Palus Putredinus is the mare like area left of Rima Hadley.

Apollo 15 was the first mission that used the rovers. Video from this mission, with the cars bouncing across the lunar landscape (seleonoscape?) is great fun to watch. A number of these clips can be seen on Wikipedia by searching on Apollo 15. I don't recall this, but apparently they released a small lunar "sub-satellite" when they left lunar orbit.

ADDITIONAL TOPOGRAPHICAL OBSERVATIONS



SOUTH POLE – Richard Hill – Tucson, Arizona, USA Decemer 10, 2013 00:05 UT. Seeing 6/10. TEC 8" f/20 MAK-CASS, SKYRIS 445. 656.3 nm filter.

Last December there was a clear night where we had a rather favorable libration for viewing features near the south pole of the moon. Taking advantage of this I got today's montage. By taking advantage of these times with areas of the limb are tipped towards or away from you, features that are normally over the limb can be seen. I labelled the ones that would be of greater interest.

The crater in a crater that is Boussingault is very distinctive and a good land mark for jumping to other features. To the left of it are Boguslawsky and Demonax and above them Manzinus and Mutus with the two small craters in it. Moving further to the left you find the very distinctive crater Schomberger with Scott and Amundsen in a line below. These last two were named in honor of the two men that headed teams that raced for the South Pole on the Earth. Amundsen's team made it first and are thus closer to the lunar pole. Above Schomberger in deep shadow is Simpelius. To find the pole draw a line from the middle of Scott through the center of Amundsen and further on about the diameter of Amundsen. That would put it right on the limb in this image.

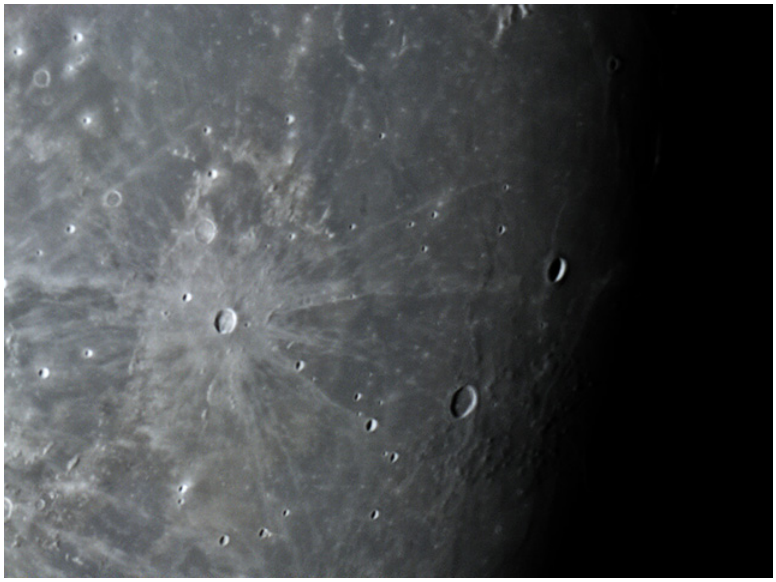
BRIGHT LUNAR RAYS PROJECT

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

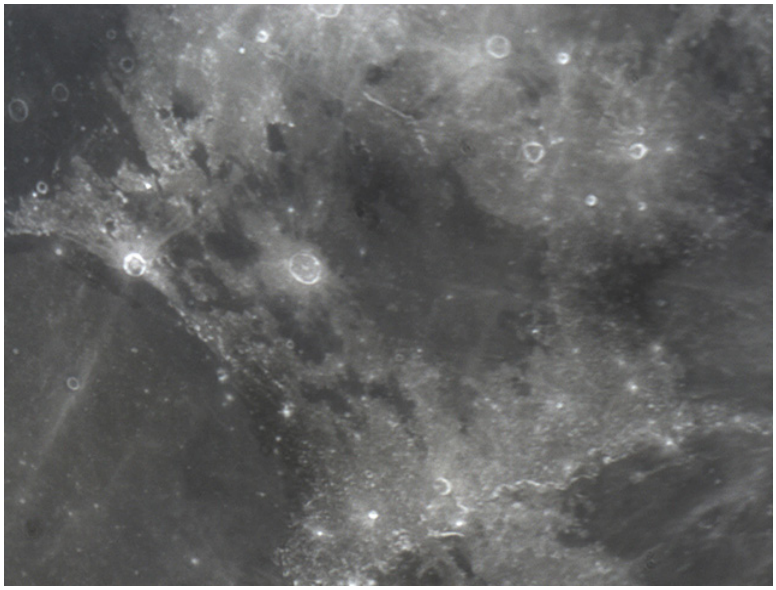
Assistant Coordinator – William Dembowski – dembowski@zone-vx.com

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

RECENT RAY OBSERVATIONS



KEPLER-MARIUS- Maurice Collins- Palmerston North, New Zealand. August 8, 2014 08:28 UT. C-8 SCT. North down.



MARE VAPORUM- Maurice Collins- Palmerston North, New Zealand. August 9, 2014 08:27 UT. C-8 SCT. North down.

LUNAR TRANSIENT PHENOMENA

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LTP NEWSLETTER – SEPTEMBER 2014

Dr. Anthony Cook - Coordinator

July was a low observer participation month, due to a combination of: vacations, lowness of the Moon above the horizon (as seen from the northern hemisphere), and of course the infamous weather. We did however receive observations from the following observers: Jay Albert (Lake Worth, FL, USA - ALPO) observed: Archimedes, Aristarchus, Censorinus, Plato, Proclus, and Vallis Schroteri. Maurice Collins (ALPO, New Zealand) imaged Arago, Aristillus, Clavius, Copernicus, Plato, Ptolemaeus, and obtained several whole disk image mosaics. Marie Cook (Mundesley, UK - BAA) observed Proclus. Michal Pyka (Poland) observed Mare Humorum.

News: I will be attending the European Planetary Science Congress in Lisbon, Portugal on 7-12 September, and will report back on any news from LADEE, LRO, or other missions concerning lunar dust or volatiles. You can take a look at the Terrestrial Planets Session: Lunar abstracts, on the following web site: http://meetingorganizer.copernicus.org/EPSC2014/meetingprogramme .

Jill Scambler has emailed me to say that she is studying the distribution of LTP with respect to lunar geology. Ben Hollingberry, a Moon Zoo participant is busy compiling a spreadsheet catalogue of new discovered lunar features described by Moon Zoo members.

Figure 1. The International Space Station imaged against the Moon on 2014 Jul 23 UT01:38 by Mike Pyka. North is towards the top left. Image sharpened slightly as the Moon was low down on the horizon at the time.

Mike Pyka, although not making a repeat illumination observation, did manage to capture the International Space Station transiting across the Moon. This is his first attempt at this, so I thought I would show this to encourage others to have a go. Also as a reminder that if you ever have a bright or dark spot appear in one of your images, it is always worth checking satellite predictions, just in case it was one of the many man-made satellites up there that accidentally got in the way! Mike said that the transit was quite fast, just 0.6 sec to pass

through his telescope field of view.

LTP Reports: No LTP reports were received in July.

Routine Reports: Here is a selection of reports received for July that can help to re-assess some past LTP observations.

On 2014 Jul 05 UT 05:23-05:34 and 2014 Jul 07 UT 08:23-08:47 Maurice Collins (ALPO) imaged a light patch (Curtis) east of Picard under the similar illumination, and topocentric libration (to within +/-1°) to a Victorian era LTP observed by A. Stanley Williams from 1882 Aug 21 & 23 respectively:

A. Stanley Williams (Brighton, UK) on 1892 Aug 21 at 19:30UT (Moon's age 7.9 days) noticed a spot at least half as bright, and as large as Picard, near to Picard crater. Picard was used as a comparison crater in terms of brightness. This observation was reported in the Astronomical Register of the Royal Astronomical Society and is not included in the Cameron catalogs. It is one of many measurements of the brightness of this spot for different illumination angles and is one of three outlying brightness points spotted on a graph by Williams. On 1892 Aug 23 at Moon's age 10.0 days, he recorded the spot at a brightness of +1.5. The ALPO/BAA weight=3.

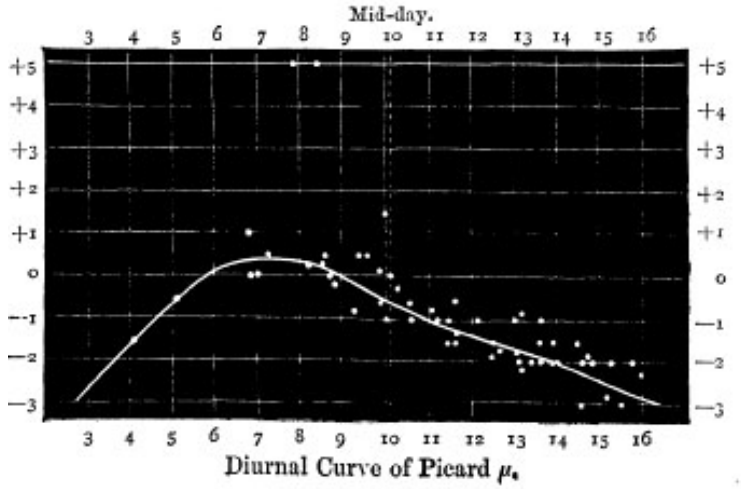

Figure 3. Reproduction of the graph of the brightness of the crater Curtis, east of Picard, published in the Royal Astronomical Society's Astronomical Register, Vol 21, p109-112, in 1883. See: http://articles.adsabs.harvard.edu//full/1883AReg...21..109./0000120.000.html . Three outlying points are visible which show the crater significantly brighter than what it should normally be, two of which refer to the LTP discussed here.

We have discussed Curtis crater before, see the June 2014 newsletter, albeit for another LTP, but this is the first time that we have repeat illumination and viewing conditions images for the Williams observations. The fact that Curtis is not especially bright in the images in Fig 3, pretty much rules out any specular reflection explanation for what was seen in 1882. Atmospheric seeing and transparency cannot account for the brightening seen either. So should we consider increasing the weight for this 1892 LTP to above 3? A weight of 4 is reserved for a confirmed observation where one of the observers is not experienced, but one observer is. A weight of 5 is for confirmation by two or more experienced observers. In a sense the images that Maurice took, although not made simultaneously with the Victorian observations, do show that there is no way that Curtis should have been as bright (or as large) as Williams mentioned. On the negative side, I think that the Williams letter to the Astronomical Register could have been better worded, is somewhat ambiguous, and he should have been a bit clearer about the anomalous brightness measurements that he made, in particular the relevant points on the graph should have been in different symbols to distinguish them from the background scatter - read the letter yourself on the web link above and see what you think? For this reason, although it is tempting to put the weight up to 4, I will keep it at 3 for now. If anybody knows any further information about these 1882

observations, or indeed the reliability and objectiveness of Williams as an observer, then please let me know.

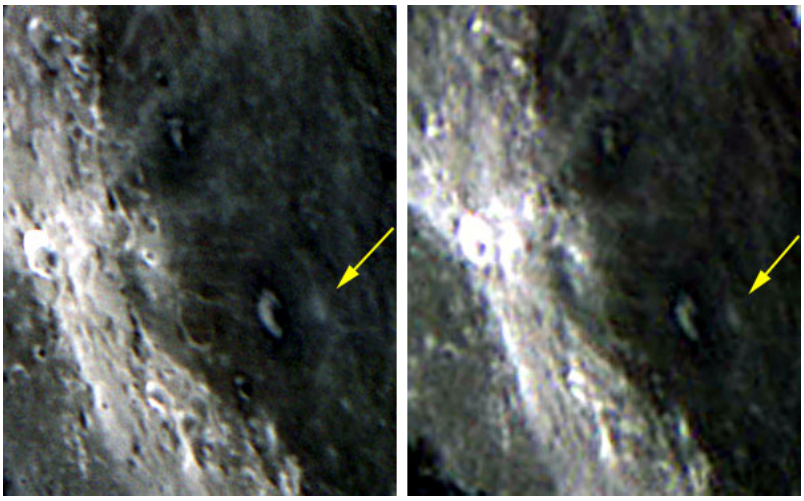

Figure 3. Images by Maurice Collins of the spot east of Picard (now known as the crater Curtis) arrowed. North towards the top. **(Left)** 2014 Jul 05UT 05:23-05:34. **(Right)** 2014 Jul 07 UT 08:23-08:47.

On 2014 Jul 12 UT 01:45-02:15 Jay Albert (ALPO) observed Plato under similar illumination & topocentric libration, to within +/-1°, for the first LTP report below, and to within +/- 0.5°, in terms of illumination, for the second LTP report below:

Plato 1967 Feb 24 UT 04:21 Observed by Kelsey (Riverside, CA, USA, 8" reflector?) Using an Eng. moon blink device, discovered red brightest on NNE wall summit - duration 10min. NASA catalog weight=3. NASA catalog ID #1017. ALPO/BAA weight=3.

On 1968 Dec 04 at UT 19:00-20:15 Prof. Luciana Dall'Ara, (Switzerland, 16" reflector, x140) observed a feeble color blink on Plato. Cameron says that the observer had been alerted by Middlehurst for tidal predictions. The Cameron 1978 catalog ID=1104 and weight=3. The ALPO/BAA weight=2.

Jay comments that for the first LTP he did get a blink with the W25 red and W44A blue filters, but this was not surprising because the entire field was brighter in red light (possibly influenced by the haze and low altitude). He also noticed a small bright spot on the NNE rim. The red color was brighter there as in the first LTP description. The central craterlet was very bright; the N craterlet pair and the S craterlet were also seen with some difficulty. The W landslip was prominent and bright. For the 2nd LTP he did not notice anything especially unusual other than the excess of red over the entire field. It is difficult to know what to do about the weights here. The only information about the Kelsey LTP is a single sentence in JALPO Vol 31 p163, which was pretty much covered by the Cameron catalog description above – Jay saw the small bright spot and confirmed that it was brighter in red, as in 1967, however the 1967 observation also had a specific duration of 10 min, and the Moon was at a high altitude of 42° above the horizon – alas I do not have the transparency conditions for that date. For the 1968 LTP, the description is even less specific, and the observer had spotted a more prominent LTP in Aristarchus at the time – though the telescope used was quite large. Both observations used filters to confirm the colors. I guess this is something we cannot resolve this time, despite Jay's careful visual observations, so I will leave the weights as they are.

On 2014 Jul 13 UT 23:55 Marie Cook (BAA) observed Proclus under similar illumination to the following Bartlett Proclus LTP:

Proclus 1955 Oct 03 UT 02:10-02:40 Observed by Bartlett (Baltimore, MD, USA, 5"reflector x180, S=1-0?, T=4) "Proc. D (his ID) normally a bright white spot on E. Floor disappeared as a dark spot, I=2.5 & barely disting. from 3deg gray. In July lunation it was seen as normal bright spot at col. 347.57, 359.36, 36.74 & 61.83 but vanished after 61.83. C.p. abnormally dark & close to floor

intensity. At 1st failed to find it I=2.5 whereas it is normally 5.0." The Cameron 1978 catalog ID=616 and weight=4. The ALPO/BAA weight=2.

Marie comments that the crater looked normal, and that the central spot (not really a central peak i.e. C.p. as Bartlett describes) was normal in brightness. She could not make out Bartlett's other floor spot, but the transparency was poor. I will make a note of this appearance but will leave the ALPO/BAA weight unchanged as we need more repeat illumination observations to look for that east floor white spot.

Suggested Features to observe in September: For repeat illumination (and a few repeat libration) 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 TLP 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, firstly read the LTP checklist on http://users.aber.ac.uk/atc/alpo/ltp.htm, and if this does not explain what you are seeing, 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. **Bailly**
2. **Curtis**
3. **Grimaldi**
4. **Hadley Rille**
5. **Kepler**
6. **Mare Vaporum**
7. **Petavius**
8. **Plato**
9. **Rima Calippas**
10. **Sinus Aestuum**
11. **Wilhelm**

FOCUS ON targets

X = Altai Scarp (September)
Ghost Craters (November)