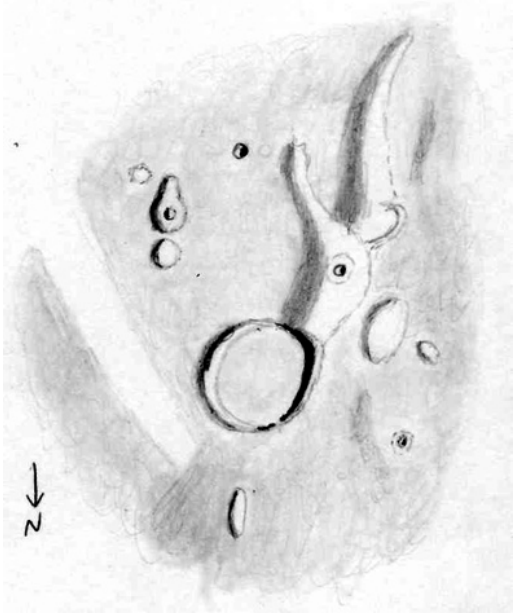
THE LUNAR OBSERVER

RECENT BACK ISSUES: http://www.zone-vx.com/tlo_back.html

A PUBLICATION OF THE LUNAR SECTION OF THE A.L.P.O.
EDITED BY: William M. Dembowski, F.R.A.S. - dembowski@zone-vx.com
Elton Moonshine Observatory - http://www.zone-vx.com
219 Old Bedford Pike (Elton) - Windber, PA 15963

FEATURE OF THE MONTH - DEC. 2007



GAMBART

Sketch and text by Robert H. Hays, Jr. - Worth, Illinois, USA
July 7, 2007 - 07:35 to 08:01 UT
15cm Newtonian - 170x - Seeing: 7-8/10

I sketched this crater and vicinity on the morning of July 7, 2007 before the emersion of an 8th-magnitude star. This is a middling crater southeast of Copernicus. It has noticeable points on its east and west rims, and a tiny gap to the northwest. Its floor appeared smooth and featureless, and the same tint as the surrounding mare. Gambart NA is just southwest of Gambart, while Gambart N is farther to the south. The tiny pit Gambart EA is to the northwest, and is surrounded by a small halo. Two wide, low ridges extend southwestward from Gambart; one of them contains NA. More low elevations lie to the west and north. A pair of rounded hills are to the southeast, and east of Gambart N. The more southerly one looks almost double, and has a tiny peak on top. It gives the appearance of a pebble on a boulder. A small, bright, shadowless patch is just east of this hill. A faint ray runs northwest-southeast east of Gambart; this ray may be from Copernicus.

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

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

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

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

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

LUNAR CALENDAR - DECEMBER 2007 (UT)

Dec. 01	11:00	Moon 2.1 Degrees SSW of Saturn
Dec. 01	12:44	Last Quarter
Dec. 05	18:00	Moon 6.5 Degrees SSW of Venus
Dec. 06	16:55	Moon at Apogee (406234 km - 252422 miles)
Dec. 09	08:00	Moon 4.4 Degrees S of Mercury
Dec. 09	17:40	New Moon (Start of Lunation 1051)
Dec. 10	16:00	Moon 4.6 Degrees S of Jupiter
Dec. 12	22:00	Moon 0.43 Degrees SE of asteroid Vesta
Dec. 14	19:00	Moon 0.65 Degrees SE of Neptune
Dec. 16	00:00	Moon 0.95 Degrees NNW of asteroid Pallas
Dec. 16	16:00	Moon 2.1 Degrees NNW of Uranus
Dec. 17	10:17	First Quarter
Dec. 22	10:12	Moon at Perigee (360816 km - 224201 miles)
Dec. 24	01:15	Full Moon
Dec. 24	03:00	Moon 0.92 Degrees N of Mars
Dec. 28	20:00	Moon 2.5 Degrees SSW of Saturn
Dec. 31	07:50	Last Quarter

CALL FOR OBSERVATIONS:
FOCUS ON: Alphonsus

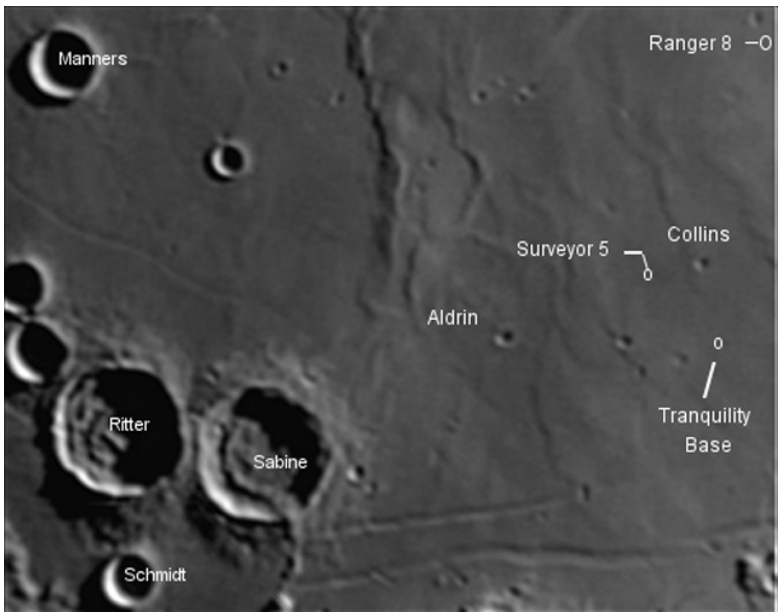
Focus on is a bi-monthly series of articles which includes observations received for a specific feature or class of features. The subject for the **January 2008** edition will be the crater **Alphonsus**. Observations of all kinds (electronic or film based images, drawings, etc.) are welcomed and invited. Keep in mind that observations do not have to be recent ones, so search your files and/or add this fascinating crater to your observing list and send your favorites to **Dembowski@zone-vx.com**

Deadline for inclusion in the Alphonsus article is December 20, 2007

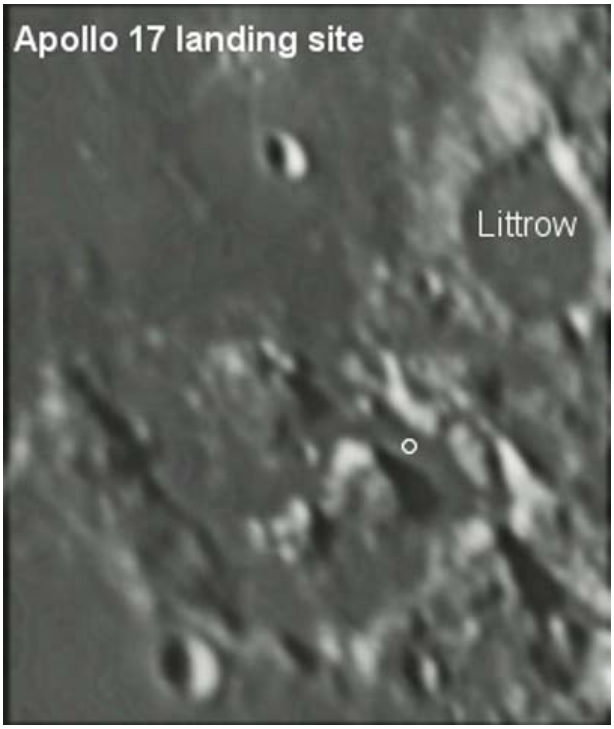
Be sure to check the November issue of TLO (Pages 3 & 4)
for information on Alphonsus LTP observations:
http://www.zone-vx.com/TLO200711.pdf

THREE APOLLO LANDING SITES

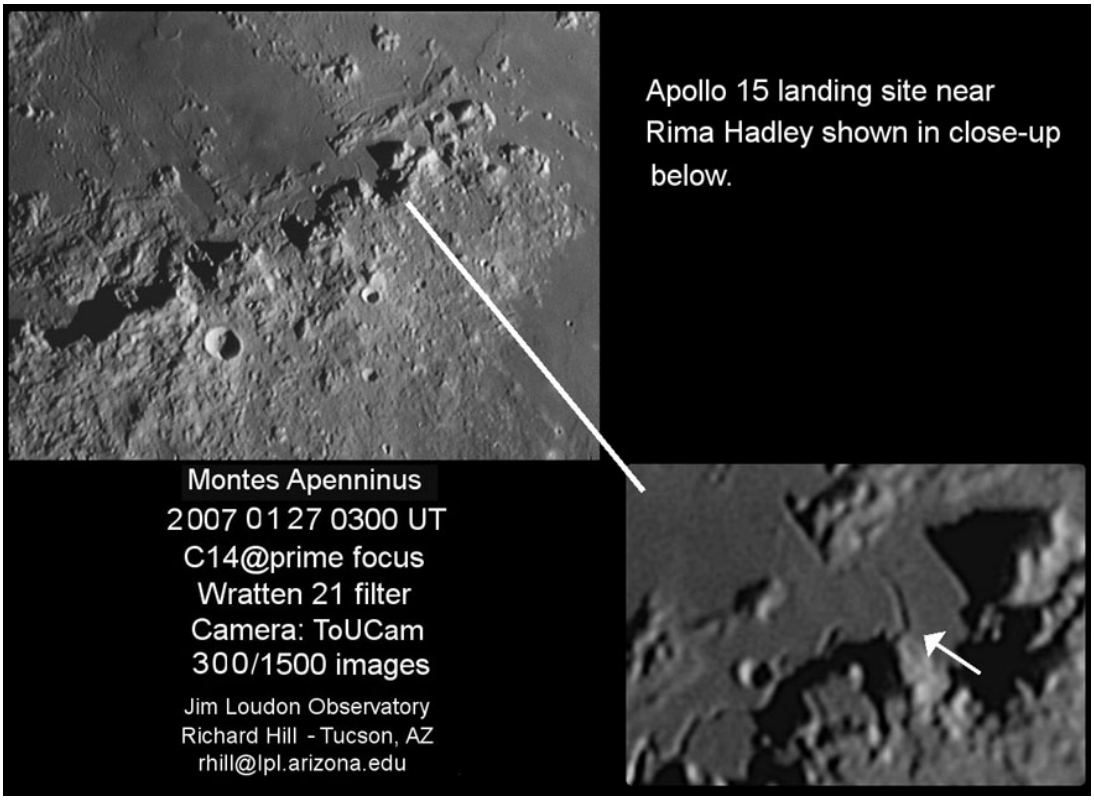
Rik Hill - Tucson, Arizona, USA

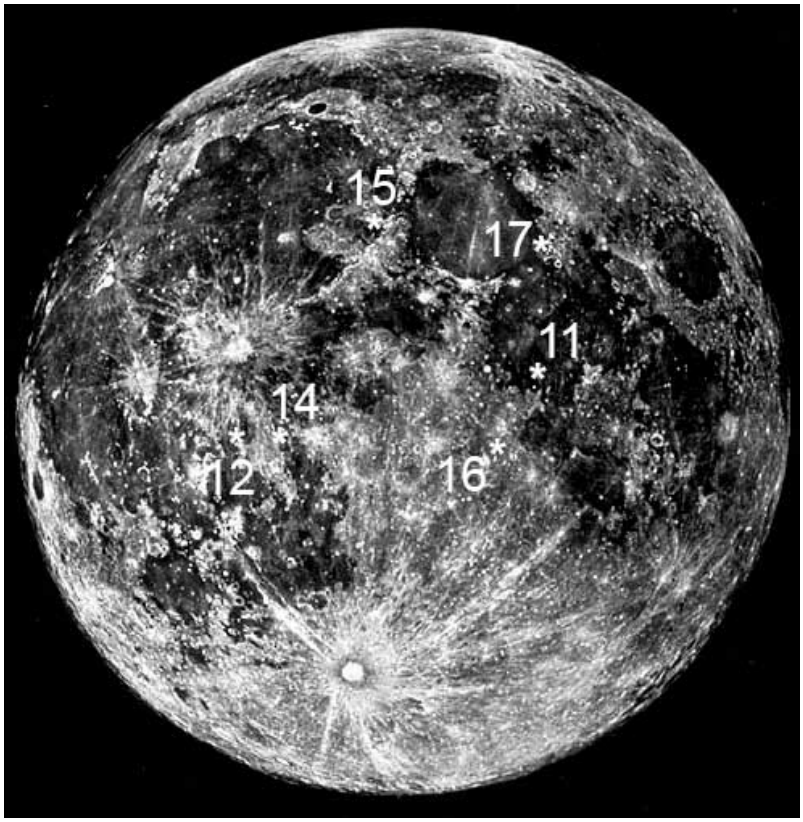


APOLLO-11 LANDING SITE NEAR RITTER & SABINE
May 23, 2007 - 04:08 UT - 14 inch SCT - Philips Toucam



APOLLO-17 LANDING SITE NEAR LITTROW
September 30, 2007 - 07:32 UT - 14 inch SCT - Philips Toucam





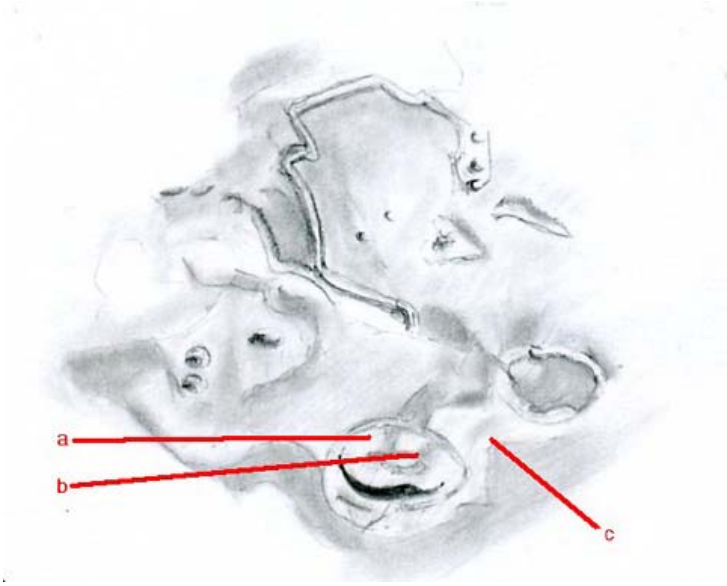
Locations of Apollo Landing Sites - (Courtesy of NASA)

BANDS WITHIN ARISTARCHUS

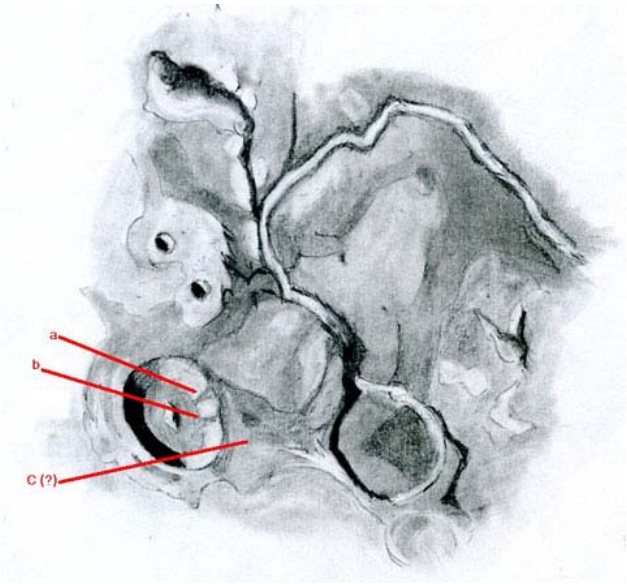
Fred Corno - Settimo Torinese, Italy

With reference to the observation published on Page 17 of the October issue of TLO
(http://www.zone-vx.com/TLO200710.pdf)

Mr. Eskildsen reports the presence of three bands in Aristarchus. I browsed through the observations I have of the same crater. I have three of them, but just two with some detail. I observed the same bandings as Mr. Eskildsen. The "c" band was somehow faint and difficult to make out in the second (2003) observation but I suspect it being there. The only very big difference I noticed is that in my observations "a" rises up to the rim of the crater.



23 August, 2002
22:00 to 23:15 UT
Vixen VMC200L - 231x
Seeing: AIII



15 March, 2003
23:35 to 00:25 UT
Vixen VMC200L - 216x
Seeing: AII to AIII

AN INTRODUCTION TO LTVT

Alexandros Filothodoros - Samos, Greece

LTVT is a very useful and powerful freeware program written by Jim Mosher. It provides functions and accuracy that other programs do not offer and the interface is very easy to use.

By just moving the cursor over the Moon, the Cartesian coordinates of the feature are displayed. There is no need to convert them to Selenographic coordinates since this is done automatically. Other indications will be displayed as well, depending on the user's selection in the "Tools-> mouse options" menu.

For images showing only a part of the Moon, as well as close ups, the "High Resolution Shaded Relief" or the "Clementine Photo Mosaic" will be needed. In order to do this you need to associate the file with the specific texture you wish. LTVT contains only a file (lores.jpg) for the "Lower Resolution Shaded Relief" so you will need to add one for higher resolution. It's easy if you have already installed VMA as these two software programs complement each other. You just have to choose the "Change File Associations" option and follow the instructions in order to use the "hires.jpg" file from VMA, or the "hires_clem.jpg" if you wish to use the "Clementine Photo Mosaic texture". Furthermore, there is an option for user made images. The greyscale of the image is calculated by the texture map and not by LTVT.

Users must enter their location coordinates which are needed for the correct projection of the Moon. All other necessary geographical information (including the sub-observer and sub-solar points which are needed for a very exact estimation of the location where the terminator will be cast) are calculated automatically. To ensure accuracy, manually entered coordinates must belong to the same coordinate system as used by the texture map.

If the "Overlay dots" button is clicked, dots will appear that show the positions, name and diameter (if crater) of some lunar features. Notice that the dots have four different colours, depending on the diameter of the crater. If the dot doesn't represent a crater then it is yellow. All information is displayed on the lower right of the main window. If the "Label" button is clicked, the names of the features represented by a dot will be displayed on the lunar disk. In the "Named_Lunar_Features.csv" the user can add their own places to be dotted. The colours of the dots can be changed in the "Tools→Change dot/label preferences" menu.

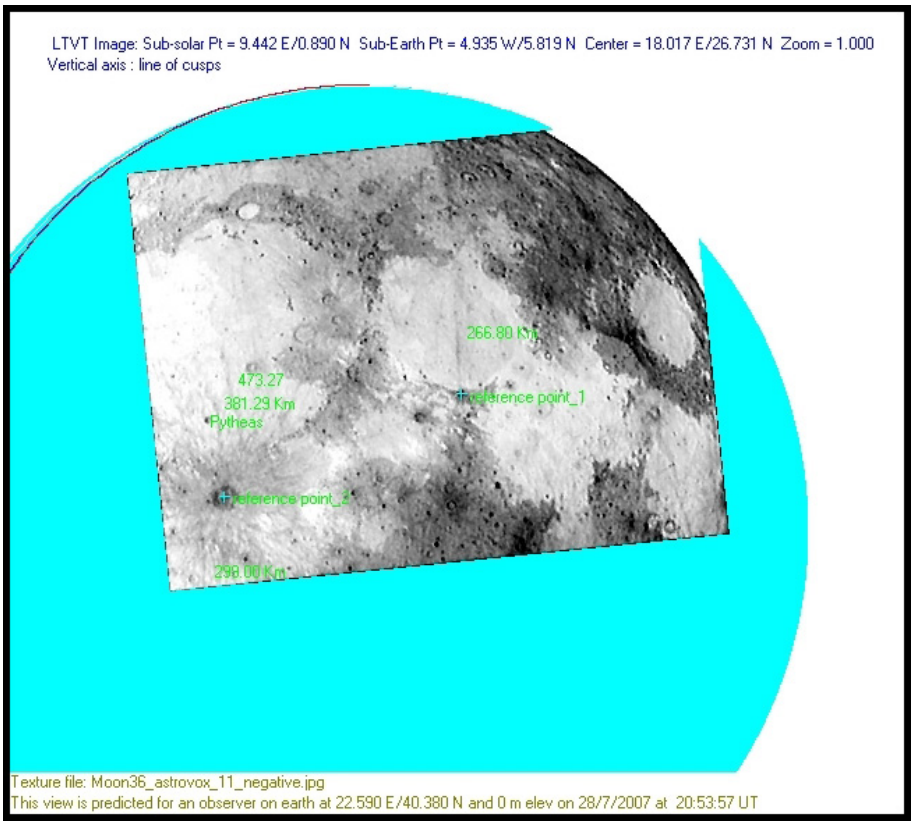
Using LTVT the user can do serious studies on their own lunar photos, such as distance, height or elevation calculations. First the user's image must be calibrated so that the correct geometry for the place and time the image was taken will be computed. (Use the "File→Calibrate a photo" menu).
LTVT can predict same lighting conditions for a specific feature. That's very useful in LTP research and in imaging the light rays passing through crater walls. (Use the "Predict" button on the main window). Go to "Tools→Change mouse options" to choose the kind of measurement you wish to make. In all cases a reference point must be set. (Right click →set as reference point). Sometimes, especially when studying crater rays, it is better to make measurements using the negative of the image.

Notice that the first time a calibrated image is saved, a "PhotoCalibrationData.txt" file is created in the file where LTVT is set up. In this file, information such as time, geographical, and some graphic information along with the directory path of the images are saved for every calibrated image. The user can save in this file somebody else's image just by copying all of the above information into the "PhotoCalibrationData.txt" file. Don't forget to change the directory path with the one on your

computer. After that the image is in the list of the calibrated images even if someone else has calibrated it. (File→Load a calibrated Photo). The "LTVT.ini" file can be used as an alternative way to change and save options such as the location and the external files used for textures
The Lunar Topographic Orthophotomaps (T.L.O.) maps can also be used for examination of regions near the equator. The map must be calibrated so that the coordinate values will be correct. To make use of the Topophotomaps, the values must be converted by the user from degrees and minutes to decimal degrees. After the calibration is finished, the map can be used as a texture. Also, the user can add labels to their images indicating the measurements that have been made (i.e. Distance measurements from a reference point). By right-clicking the mouse a quick menu is shown. It's very handy especially when calibrating an image and adding labels.

In LTVT the crater floors are considered to be level, which is not always correct, and it might be a bit confusing when shadow lengths in steep crater floors are measured. In LTVT the mountain heights are not taken into consideration. As a result, there is no information on the main window about it. The heights can be measured correctly on a calibrated photo by measuring the shadow length, or the user can check VMA's information. What's more, the coordinate indications near the limb are not 100% accurate. The Moon is considered as a Lambertian sphere, so the real terminator might not match neither the red nor the blue lines. These lines represent the borders of those areas where the sun is fully visible (red) and fully invisible (blue). The white circle indicates the libration zone. The accuracy of the coordinate values depends on the ephemeris (LTVT uses the JPL one) used as a database as well as on the coordinate system used. However, any deviation is minimal.

In general, LTVT is a freeware that every beginner or advanced astronomer can easily use. It offers one more way for amateurs to provide important and numerous data. Furthermore it is a means for astronomers, amateurs and professionals, to collaborate and share experience.



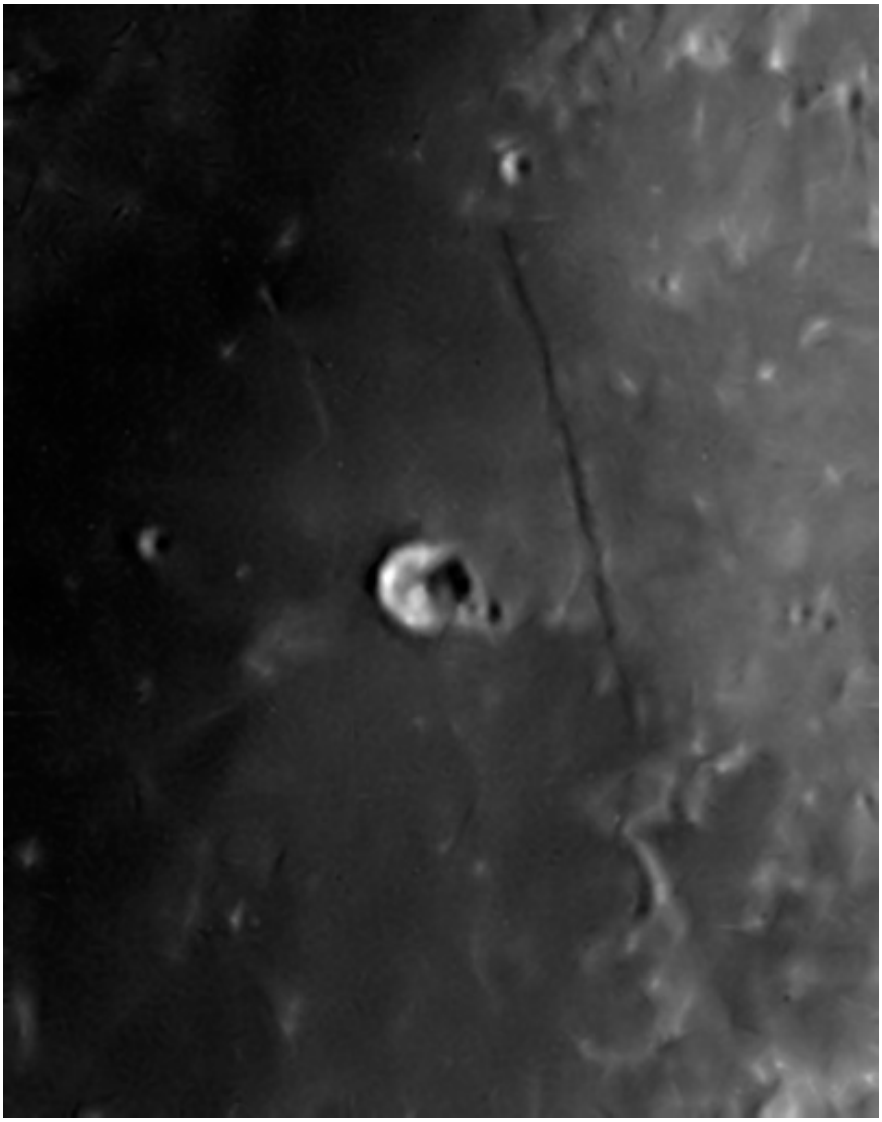
Distances on the lunar surface as calculated using LTVT and negative webcam image by the author. (80ED APO f/7.5 Refractor - 28 July 2007 - 22:53:40 UT)

ON THE LIGHTER SIDE OF THE MOON

Howard Eskildsen - Ocala, Florida, USA

This is one of the strangest views of a crater (Birt) that I have seen. Has Batman (Birtman?) actually landed on the moon? I will have to notify the National Enquirer!

The unusual dark markings in the center of the crater must be due to a combination of a ridge on the eastern part of Birt rising above the shadowed floor and the dark bands from the western crater converging with the shadows. The constant changing of interior markings is another good reason to re-observe the craters over and over again.



BIRT
Digital image by Howard Eskildsen - Ocala, Florida, USA
October 23, 2007 - 00:15 UT - Seeing: 7/10 - Trans: 4/5
Meade 6 inch Refractor - 2x Barlow - Orion StarShoot II

LUNAR TOPOGRAPHICAL STUDIES

Coordinator - William M. Dembowski, FRAS
dembowski@zone-vx.com

OBSERVATIONS RECEIVED

WAYNE BAILEY - SEWELL, NEW JERSEY, USA
Digital images of Alphonsus (2), Theophilus (2), Atlas & Hercules (3), Catharina, Alphonsus (4), Deslandres, Cassini (2), Dionysius, Pitatus, Schickard, Ptolemaeus (2),

Banded Crater Report Forms with digital images of Beaumont-D, Eudoxus-A (2), Menelaus (2), Birt (2), Conon (2), Burg (3), Agatharchides-A, Mersenius-S, Hipparchus-K (2), Aristillus, Pytheas, Aristarchus, Bode, Hercules-G

MAURICE COLLINS - PALMERSTON NORTH, NEW ZEALAND
Digital images of Aristillus & Autolycus (2), Ptolemaeus region, Southern Terminator (2), Cassini, Montes Apeninnus, Deslandres, 1-day Moon, Bullialdus, Clavius, Sinus Iridum

FRED CORNO - SETTIMO TORINESE, ITALY
Drawings of Aristarchus (2)

ED CRANDALL - WINSTON-SALEM, NORTH CAROLINA, USA
Digital images of Theophilus area, Gassendi region, Copernicus, Montes Riphaeus, Kies Ray, Plato

HOWARD ESKILDSEN - OCALA, FLORIDA, USA
Digital images of Capuanus, Schiller-Zucchinus Basin, Dionysius, Birt, Alphonsus

Banded Crater Report Forms with digital images of Ariadaeus, Bode, Silberschlag, Aristillus, Birt, Burg, Conon, Theaetetus, Pytheas

DONALD SPAIN - LOUSVILLE, KENTUCKY, USA
Computerized drawing of Alphonsus

ROBERT WLODARCZYK - CZESTOCHOWA, POLAND
Drawings of Gambart, Vitello & Lee & Doppelmayer

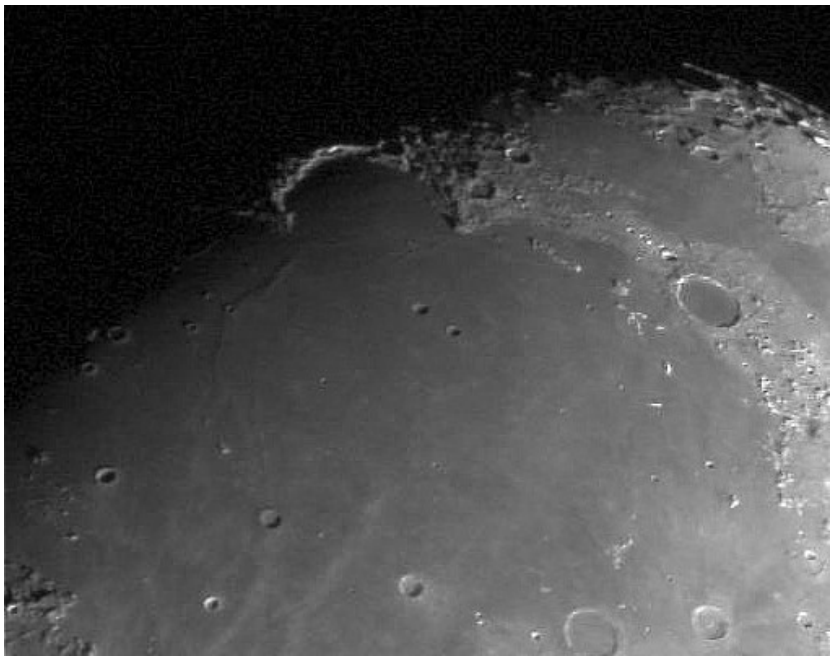
RECENT TOPOGRAPHICAL OBSERVATIONS

CATHARINA

Digital image by Wayne Bailey - Sewell, New Jersey, USA

October 31, 2007 - 05:44 UT - Seeing: 4/10 - Trans: 5/6 - Colong: 151.8

Celestron 11 inch SCT - 2x Barlow - Lumenera Skynyx 2-1M Camera

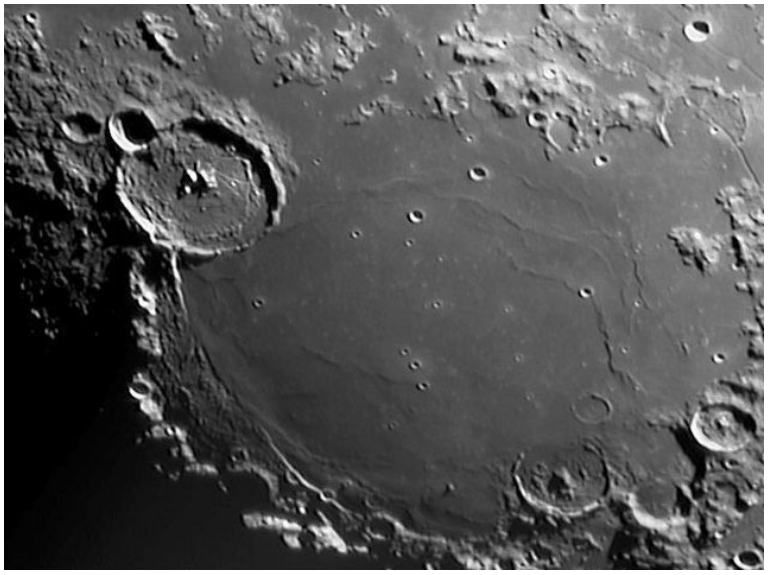


SINUS IRIDUM

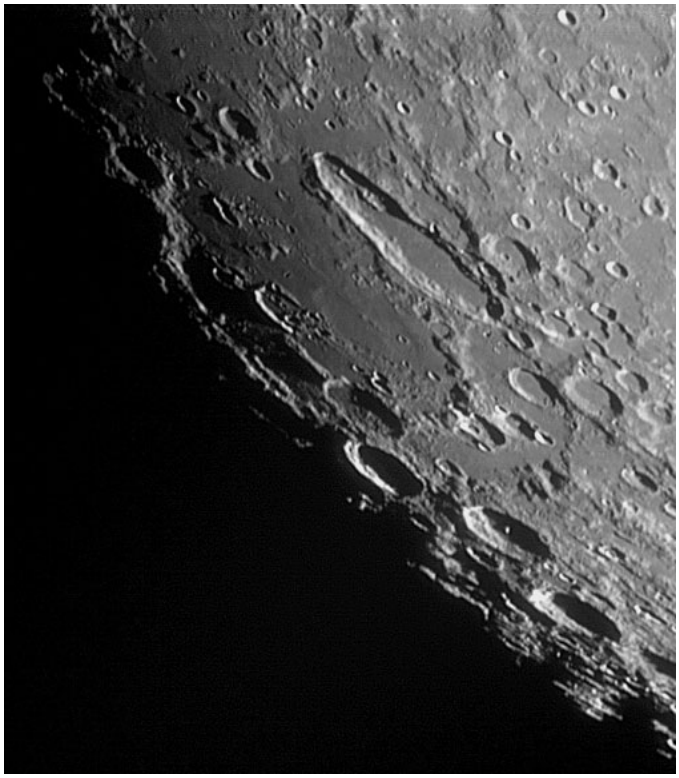
Digital image by Maurice Collins - Palmerston North, New Zealand

November 11, 2007 - Meade ETX90 - Meade LPI Camera

RECENT TOPOGRAPHICAL OBSERVATIONS

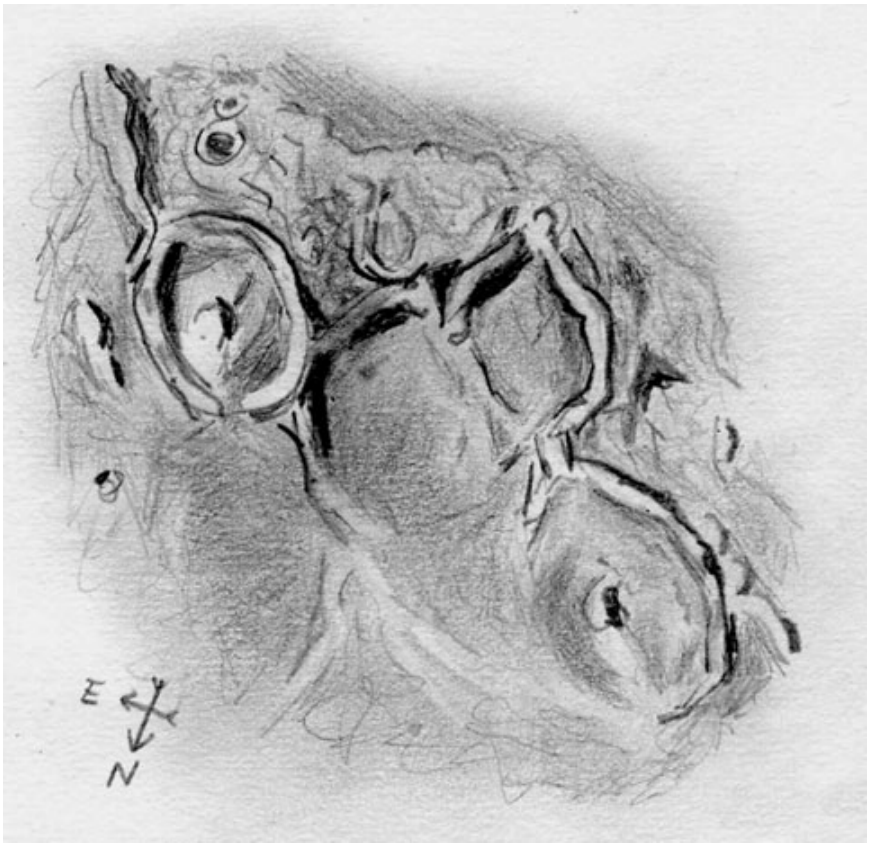


MARE HUMORUM & GASSENDI
Digital image by Ed Crandall - Winston-Salem, North Carolina, USA
November 21, 2007 - 00:46 UT - Colong: 45 - Seeing: 5-6/10 - Trans: 4/6
110mm APO Refractor - 3x Barlow - Philips Toucam



SCHILLER ZUCCHIUS BASIN
Digital image by Howard Eskildsen - Ocala, Florida, USA
October 23, 2007 - 00:01 UT - Seeing: 7/10 - Trans: 4/6
Meade 6" f/8 Refractor - 2x Barlow - Orion StarShoot II Camera

RECENT TOPOGRAPHICAL OBSERVATIONS



VITELLO, LEE, & DOPPELMAYER
Drawing by Robert Wlodarczyk - Czestochowa, Poland
September 23, 2007 - Approx. 18:30 UT - Seeing: 6/10 - Trans: 4/6
18cm f/6.6 Newtonian - 130x

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:

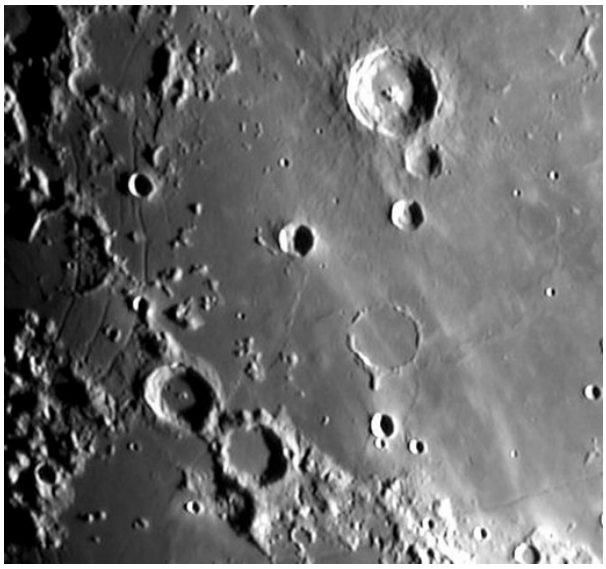
Name and location of observer
Name of feature
Date and time (UT) of observation
Size and type of telescope used
Orientation of image: (North/South - East/West)
Seeing: 1 to 10 (1-Worst 10-Best)
Transparency: 1 to 6
Magnification (for sketches)
Medium employed (for photos and electronic images)

BRIGHT LUNAR RAYS PROJECT

Coordinator - Willliam M. Dembowski, FRAS

PROGRESSION OF A LUNAR RAY BISECTING CRATER KIES

(Lunation: 10-days)
Digital image by Bill Dembowski
Elton, Pennsylvania, USA
October 20, 2007 - 23:13 UT
Celestron 8 inch SCT
Orion StarShoot II



(Lunation: 11-days)
Digital image by Ed Crandall
Winston-Salem, North Carolina
November 20, 2007 - 01:10 UT
110mm APO Refractor
3x Barlow - Philips Toucam

(Lunation: 13-days)
Digital image by Howard Eskildsen
Ocala, Florida, USA
October 23, 2007 - 00:18 UT
Meade 6" f/8 Refractor
2x Barlow - Orion StarShoot II

BANDED CRATERS PROGRAM

Coordinator - Willliam M. Dembowski, FRAS

Banded Craters Program Website: http://www.zone-vx.com/alpo-bcp.html

Wayne Bailey is in the process of creating locator maps for the Banded Craters Program. The first three have been uploaded to the BCP Website at full resolution:

Cassini-Conon Area - http://www.zone-vx.com/alpo-bcp-map1
Copernicus Area - http://www.zone-vx.com/alpo-bcp-map2
Hipparchus-Birt-Nicollet Area - http://www.zone-vx.com/alpo-bcp-map3

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

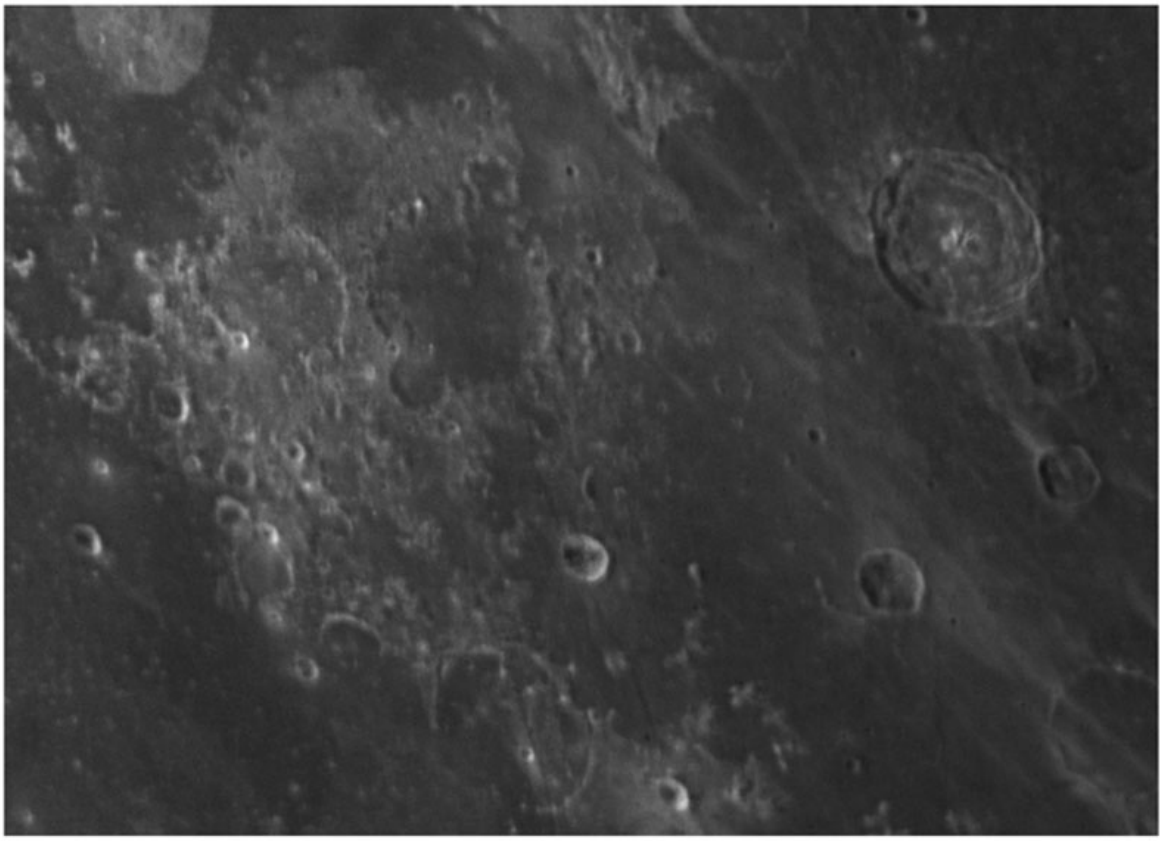
Crater Observed: Agatharchides A
Observer: Wayne Bailey Observing Station: Sewell, NJ
Mailing Address: 17 Autumn Lane, Sewell, NJ 08080
Telescope: Celestron SCT 28 cm f/10 + 2x barlow
Imaging: Skynyx 2-1M Filters: Schuler IR72
Seeing: 4/10 Transparency: 5/6
Date (UT): 2007/10/31 Time (UT): 07:01
Colongitude: 152.4 Latitude: -1.4
Position of crater: Selen. Long. Selen. Lat.
28.4° West 23.2° South
Lunar Atlas Used as Reference: Rukl, Atlas of the Moon, Revised Updated Ed.

Image (North up): (East right):

Comments:

Two E-W dark bands cross the floor and walls. The separation of the bands increases to the W. The entire crater is sharply divided into a bright E half and darker W half. The dividing line aligns with a rill that passes through the crater.

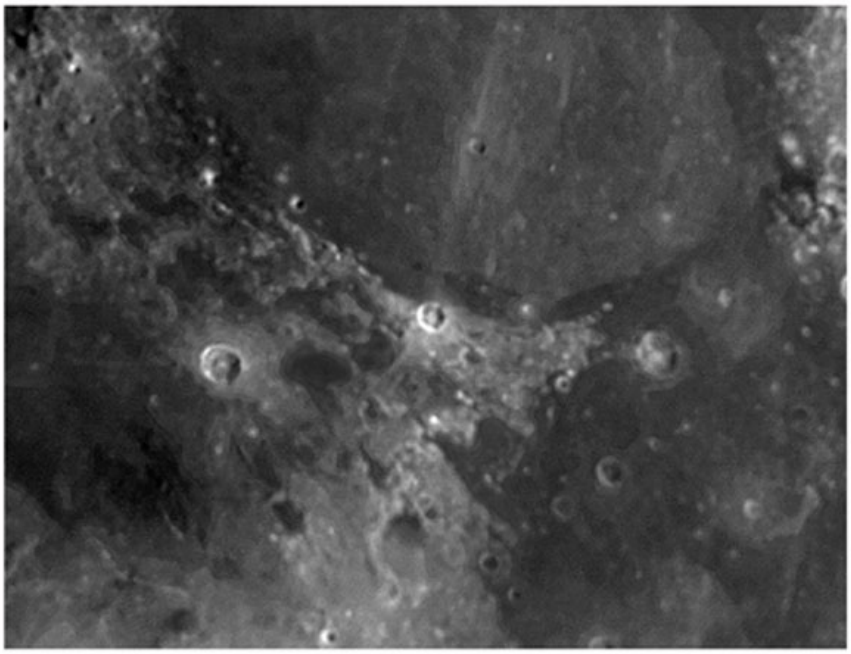
Additional banded craters on this image are: Konig (W24.6, S24.1), Hippalus B (W30.0, W25.1), Campanus A (W28.6, S26.0)



A.L.P.O. Lunar Section - Banded Craters Observing Form

Crater Observed: Menelaus
Observer: William M. Dembowski Observing Station: Elton Moonshine Observatory
Mailing Address: 219 Old Bedford Pike, Windber, PA 15963
Telescope: Orion StarShoot II 20 cm f/10
Imaging: Orion StarShoot II Filters:
Seeing: 3/10 Transparency: 3/6
Date (UT): 2007/10/20 Time (UT): 23:23
Colongitude: 27.0
Image: (North up) (East right)

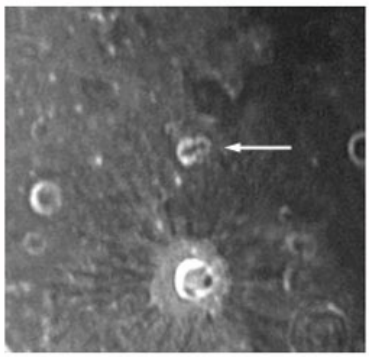
Comments:



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

Crater Observed: Ariadaeus
Observer: Howard Eskildsen Observing Station: Ocala, Florida
Mailing Address: P.O. Box 830415, Ocala, Florida, 34483
Telescope: Meade Refractor 15.2 cm f/8
Imaging: Orion Starshoot II, 2X Barlow, Filters: None
Seeing: 7/10 Transparency: 4/6
Date (UT): 2007/10/23 Time (UT): 00:12
Colongitude: 52.7°
Position of crater: Selen. Long. Selen. Lat.
17.3° East 4.6° North
Lunar Atlas Used as Reference: Virtual Moon Atlas Expert Version 2.1 2004-11-07

Image (north up):



Comments:

A dark central band crosses the two craters while dark rays from Dionysius cross the bright walls of Ariadaeus and Ariadaeus A.

LUNAR TRANSIENT PHENOMENA

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

EDITOR:
Due to some transient technical difficulties, the November LTP Newsletter did not appear in last month's issue of TLO. It is presented here in its entirety.

LTP NEWSLETTER - NOVEMBER 2007

Dr. Anthony Cook - Coordinator

Observations were received from several observers during September – I hope to go back to more detailed descriptions of who submitted observations after I have sorted out my backlog of email files from the move from Nottingham to Aberystwyth. So apologies to those who have not seen their name appear in the last couple of months.

This month I thought I would discuss Prof Arlin Crott's paper No. 3, entitled: "Lunar Outgassing, Transient Phenomena and the Return to the Moon III: Observational and Experimental Techniques" Again I would just like to stress that as far as I am aware these series of papers have not been past the referee stage in the Icarus and Astrophysics journals and made it into print yet. However they are available for all to read on the following web site: http://www.astro.columbia.edu/~arlin/LTP/ at Columbia University in the US. So my summary is based upon these pre-published versions. Paper 3 is concerned with how, using modern equipment it is possible to overcome many of the shortcomings of past opportunistic observations and detections. It is particularly important that a systematic approach for LTP detection is adopted to support current space missions such as SELENE and LRO. It is crucial that it can cope with the wide expected range of phenomena that might be seen (see discussion on paper II). The main proposed technique is called "subtraction", namely taking an average image of a set of images of the same area of the Moon for reference, then taking a new image and simply looking for a difference. Edges features such as rough terrain may have to be masked out to remove seeing effects. A telescope on Cerro Tololo is now operating at an image scale of approximately 1 sec of arc per pixel and is imaging the Moon every 10 sec i.e. sufficiently long enough to pick up many types of LTP. The sensitivity will be at the 1% level and so 5-10 times more sensitive than the human eye – it is hoped that this increase in sensitivity will increase the detection frequency of LTP to perhaps several per month? The systematic nature of the detection system would avoid the possible statistical selection effects that have been suspected of being a problem in the past. Once the automated detection system has been perfected then there is the potential to bring scopes of higher angular resolution, polarization capability, or spectrographs on-line if the resources and funding are available?

Discussion also takes place of detection of LTPs from orbit. Imaging cameras placed in the Lagrange points could augment Earth-based coverage with continuous coverage, but would be expensive if stand alone and not part of some other proposed space mission. To look for lunar ice reserves at say 15m (see paper 2) below the surface a high frequency radio sounder would be needed e.g. 100-300MHz. Although working at much lower frequencies, the Lunar Reconnaissance Orbiter Mini Radio Frequency experiment might be able to map changes to the lunar regolith, from outgassing, by taking before and after imagery – this of course assumes that there will be sufficient imagery to overlap.

From low lunar orbit, the existing fleet of spacecraft due to go to the Moon will have smaller areas of the surface to map, but by imaging in blue wavelengths will be able to easily pick up fresh changes to the lunar soil, potentially from recent impacts, landslides, or outgassing, especially if previous short waveband imagery exist of the same areas which and can be used for comparison. Concerning Radon outgassing, the author states that the Alpha particle detector on the current SELENE mission will be 25 times more sensitive than the Apollo 15 mission – so should be very suitable for mapping Radon release areas. For other gases a directional mass spectrometer would be appropriate which could recover both the atomic mass and direction of the particles in near real time – such equipment would fare better in very low lunar orbits in order to maximize sensitivity and spatial resolution.

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

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LTP NEWSLETTER - DECEMBER 2007

Dr. Anthony Cook - Coordinator

Firstly Happy Holidays to all of our observers. Observations were received from the following observers during October: Clive Brook (Plymouth, UK), Tony Buick (UK), Maurice Collins (Palmerston, New Zealand), Marie Cook (Mundesley, UK), Raffaello Lena (Rome, Italy), Bill Dembowski (USA), Frank Melillo (Holtsville, NY, USA), Gerald North (Narborough, UK), and Adrian Pink (Basingstoke, UK). We had some LTP reports in October and these are detailed below:

On 2007 Oct 21 Gerald North, under Antoniadi IV-V seeing conditions, and with transparency fair-poor, noticed around 18:43 UT that the whole of Censorinus and it's ejecta blanket were unusually bright for this stage in the lunar phase (in his opinion). A phone call was made to alert other observers. By 18:51 UT the Censorinus anomaly did not seem quite as bright and steadily faded to normal brightness in just under a minute. Nearby reference craters that included, Torricelli B and Moltke, remained constant in brightness throughout, apart from fraction of a second changes due to seeing conditions. 18:57-18:59 UT Censorinus looked normal in brightness for this phase, but suspected some short slight peaks in brightness spanning periods of ~10 seconds. 19:00-19:08 UT Censorinus was normal in brightness apart from obvious small seeing fluctuations. 19:11-19:27 UT the same but now some thin cloud increasing over the Moon. 19:46 UT Moon was now only seen through a thick hazy cloud and observations ceased. Gerald comments that what he saw was a genuine change in "apparent" brightness in Censorinus and it's ejecta blanket, however this does not necessarily mean that it was a real LTP. Instead Gerald considers the possibility that with Censorinus being a nearly point like feature that, the effect of the atmospheric seeing disk on this crater is more pronounced than with other craters. Whilst it is certainly true that seeing affects the appearance of point-like features more than bigger features, I would have thought that poor seeing should have redistributed the brightness over a larger area, causing a fade in the brightest surface brightness, rather than an overall brightening. Unless of course the time when Censorinus was seen as very bright was a stable period of good? However the

reported seeing conditions suggest otherwise. Anyway in Gerald's personal opinion he rates his observation as low in terms of probability of being a LTP because it was made under poor seeing and under far from ideal transparency.

As we had not had a LTP alert for a while, and also because of the necessity to react quickly (LTP are often short term in nature) I telephoned a selection of observers and asked David Darling to email the rest. The following observers responded – note that some of these are several hours before, and the rest are after the LTP. Bill Dembowski and Frank Melillo had obtained earlier high resolution images from 00:05-02:39 UT (see Fig 1). Although Censorinus in the 02:39UT image looks fainter, this is a contrast effect as you can see that the contrast of the other features has changed too.

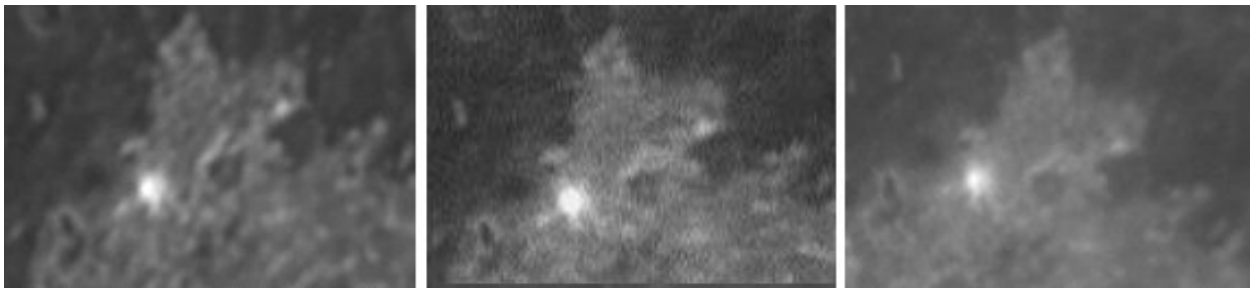

Fig 1 Bill Dembowski UT 00:05 **Frank Melillo 02:30UT** **Frank Melillo 02:39UT**

Post LTP observations were received from three observers. Marie Cook observed from 19:00-19:58 UT and although she noted Censorinus to be very bright, she considered this to be normal. She estimated it to be twice as bright as Proclus. Tony Buick and Raffaello Lena (GLR) obtained a mosaic image (19:27-1931 UT), but again these showed nothing unusual and were after the event – however they both showed that Proclus was about 10% brighter than Censorinus in contrast to Marie Cook's visual observation. I put this down to the darkness of the background Moon that we see these two bright craters against which is less easy to compensate for with visual observations than with direct pixel brightness readouts with CCD images.

The other two LTP reports were on 2007 Oct 23 at 21:15 UT when Clive Brook, using a 4" refractor at x130, noted a "fleeting faint reddish patch" inside Gassendi. Was anybody else observing then? I recently heard that Clive has had to stop observing due to ill health – so we wish him a speedy recovery. Also I heard, via Peter Grego of a Society for Popular Astronomy observer, that Adrian Pink detected a star like point in the night side of the south east corner of the Moon. However later inspection of the image shows that this was probably a cosmic ray strike on the CCD camera.

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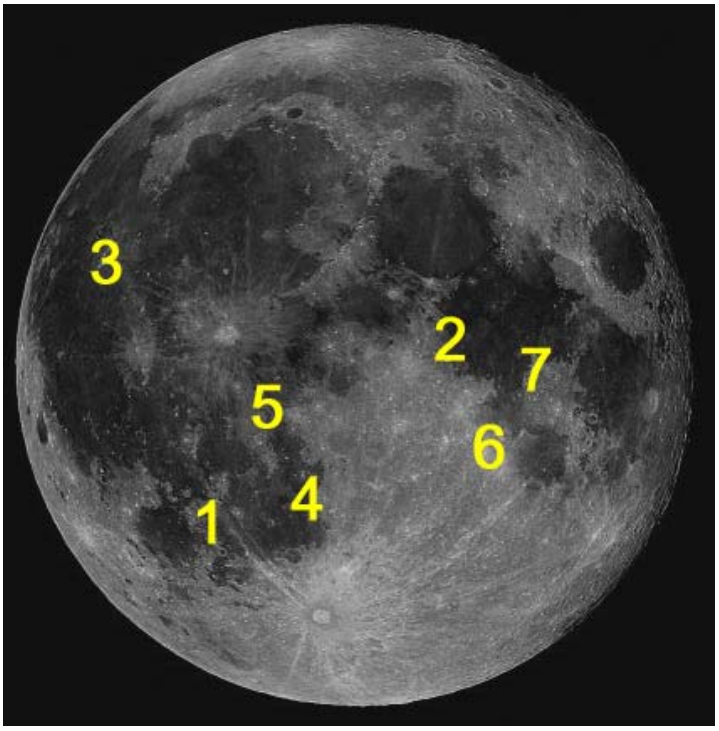
KEY TO IMAGES IN THIS ISSUE

1. Agatharchides-A
2. Ariadaeus
3. Aristarchus
4. Birt
5. Gambart
6. Catharina
7. Censorinus



8. Gassendi
9. Iridum, Sinus
10. Kies
11. Menelaus
12. Schiller
13. Vitello

X = Alphonsus
(Subject of next Focus On)