ASSOCIATION OF LUNAR & PLANETARY OBSERVERS
ALPO
Founded in 1947

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
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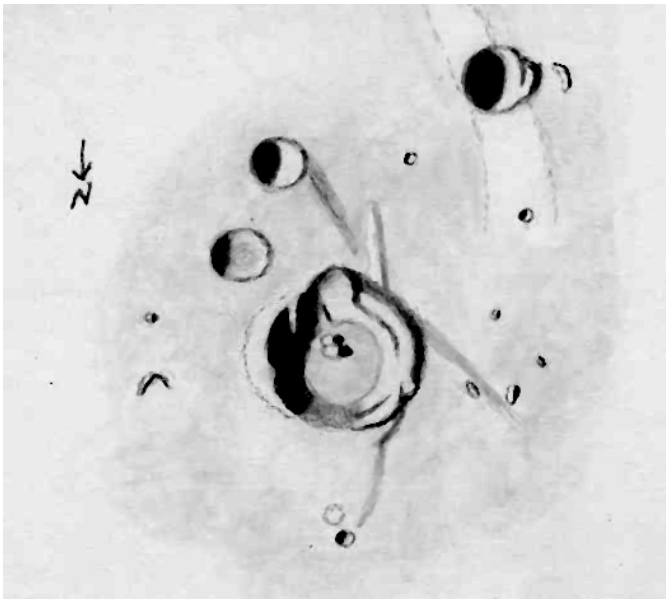
FEATURE OF THE MONTH - JUNE 2007



BULLIALDUS & VICINITY

Sketch and text by Robert H. Hays, Jr. - Worth, Illinois, USA
November 1, 2006 - 02:50 to 03:20 UT
15cm Newtonian - 136x - Seeing 5-6/10

I sketched this area on the evening of Oct. 31/Nov 1, 2006 before the moon hid 65 Aqr. Bullialdus is the largest and most conspicuous crater in Mare Nubium. It has a double peak south of center and evidence of terracing on its inside walls. The south rim has either another impact or a slump. Small slumps may have created irregularities on the east and west rims. There are three large craters toward the south. From northeast to southwest, they are Bullialdus A and B, and Konig. Bullialdus A is larger than B, but A is shallower, darker and less round than B. Indeed, Bullialdus A has much the same tint as Mare Nubium, and may have been flooded by it, though it has no breaks in its rim. Konig is either the result of two impacts or it has a large slump or landslide on its west side.

There is a short, curved ridge just west of Konig which may be the remnant of another ring. The two pits north of Konig are Bullialdus G and F. An ill-defined ray, probably from Tycho, angles up toward Konig from the southeast, then turns to a more northerly direction, spreads out and fades away. Bullialdus F is in this ray near where it disappears. There are a few small peaks west of Bullialdus. The Lunar Quadrant map shows some of them as small pits, but 1 did not see them as such. There is a pit to the north which the LQ map identifies as Lubiniezky F. A small, bright, shadowless spot is just south of this feature. There is a small partial ring east of Bullialdus which the map shows as Bullialdus R. A tiny peak is nearby. There are a few low ridges or wrinkles south and west of Bullialdus as well as near Bullialdus B and Lubiniezky F.

LUNAR CALENDAR - JUNE 2007 (UT)

June 01	01:04	Full Moon
June 01	11:00	Moon 5.7 Degrees S of Jupiter
June 06	16:00	Moon 1.4 Degrees SSE of Neptune
June 08	11:43	Last Quarter
June 08	14:00	Moon 1.5 Degrees NNW of Uranus
June 10	18:00	Moon 4.7 Degrees NNW of Mars
June 12	17:00	Moon at Perigee (363,777 km - 226,041 miles)
June 15	03:14	New Moon (Start of Lunation 1045)
June 16	10:00	Moon 5.6 Degrees N or Mercury
June 18	16:00	Moon 0.58 Degrees NE of Venus
June 19	08:00	Moon 0.43 Degrees NNW of Saturn
June 22	13:14	First Quarter
June 24	15:00	Moon at Apogee (404,538 km - 251,368 miles)
June 28	12:00	Moon 5.7 Degrees S of Jupiter
June 30	13:49	Full Moon

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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. Several copies of recent journals can be found on-line at: **http://www.justfurfun.org/djalpo/** Look for the issues marked FREE, they are not password protected. Additional information about the A.L.P.O. can be found at our website: **http://www.lpl.arizona.edu/alpo/** 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.lpl.arizona.edu/~rhill/alpo/member.html** which now also provides links so that you can enroll and pay your membership dues online.

CALL FOR OBSERVATIONS
FOCUS ON: THEOPHILUS

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 2007** edition will be the crater **Theophilus**. 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 email your favorites to **Dembowski@zone-vx.com** or send to the postal address shown in the banner on Page One of this newsletter.

Deadline for inclusion in the Theophilus article is June 20, 2007

Be sure to check the May issue of TLO (Pages 4 & 5)
for information on Theophilus LTP observations.
http://www.zone-vx.com/TLO200705.pdf

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)

2006 Alpo Conference Presentations

The new A.L.P.O. Publications Section Webpage now contains a number of the papers presented at the A.L.P.O. 2006 Conference in Atlanta, Georgia. All are in PDF format. Click on the link below:

http://www.alpo-astronomy.org/2006%20ALPO%20Conference%20Presentations.html

ELGER ON LUNAR ASTRONOMY

The Moon: A Full Description and Map of its Principal Physical Features by Thomas Gwyn Elger was originally published in 1895 and is now in the public domain. At over 100 years old the book is outdated by modern technical standards, but it is interesting how many of Elger's personal comments on lunar observation are still applicable today.

LUNAR OBSERVATION -- In observing the moon, we enjoy an advantage of which we cannot boast when most other planetary bodies are scrutinised; for we see the actual surface of another world undimmed by palpable clouds or exhalations, except such as exist in the air above us; and can gaze on the marvellous variety of objects it presents much as we contemplate a relief map of our own globe. But inasmuch as the manifold details of the relief map require to be placed in a certain light to be seen to the best advantage, so the ring-mountains, rugged highlands, and wide-extending plains of our satellite, as they pass in review under the sun, must be observed when suitable conditions of illumination prevail, if we wish to appreciate their true character and significance.

As a general rule, lunar objects are best seen when they are at no great distance from "the terminator," or the line dividing the illumined from the unillumined portion of the spherical surface. This line is constantly changing its position with the sun, advancing slowly onwards towards the east at a rate which, roughly speaking, amounts to about 30.5 min. in an hour, or passing over 10 deg. of lunar longitude in about 19 hrs. 40 mins. When an object is situated on this line, the sun is either rising or setting on the neighbouring region, and every inequality of the surface is rendered prominent by its shadow; so that trifling variations in level and minor asperities assume for the time being an importance to which they have no claim. If we are observing an object at lunar sunrise, a very short time, often only a few minutes, elapses before the confusion caused by the presence of the shadows of these generally unimportant features ceases to interfere with the observation, and we can distinguish between those details which are really noteworthy and others which are trivial and evanescent. Every formation we are studying should be observed, and drawn if possible, under many different conditions of illumination. It ought, in fact, to be examined from the time when its loftiest heights are first illumined by the rising sun till they disappear at sunset. This is, of course, practically impossible in the course of one lunation, but by utilising available opportunities, a number of observations may be obtained under various phases which will be more or less exhaustive. It cannot be said that much is known about any object until an attempt has been made to carry out this plan. Features which assume a certain appearance at one phase frequently turn out to be altogether different when viewed under another; important details obscured by shadows, craters masked by those of neighbouring objects, or by the shadows of their own rims, are often only revealed when the sun has attained an altitude of ten degrees or more. In short, there is scarcely a formation on the moon which does not exemplify the necessity of noting its aspect from sunrise to sunset. Regard must also be had to libration, which affects to a greater or less degree every object; carrying out of the range of observation regions near the limb at one time, and at another bringing into view others beyond the limits of the maps, which represent the moon in the mean state of libration. The area, in fact, thus brought into view, or taken out of it, is between 1/12th and 1/13th of the entire area of the moon, or about the 1/6th part of the hemisphere turned away from the earth. It is convenient to bear in mind that we see an object under nearly the same conditions every 59 d. 1 h. 28 m., or still more accurately, after the lapse of fifteen lunations, or 442 d. 23 h. Many observers avoid the observation of objects under a high light. This, however, should never be neglected when practicable, though in some cases it is not easy to carry out, owing to the difficulty in tracing details under these circumstances.

Although to observe successfully the minuter features, such as the rills and the smaller craterlets, requires instruments of large aperture located in favourable situations, yet work of permanent value may

be accomplished with comparatively humble telescopic means. A 4 inch achromatic, or a silver-on-glass reflector of 6 or 6 1/2 inches aperture, will reveal on a good night many details which have not yet been recorded, and the possessor of instruments of this size will not be long in discovering that the moon, despite of what is often said, has not been so exhaustively surveyed that nothing remains for him to do.

Only experience and actual trial will teach the observer to choose the particular eyepiece suitable for a given night or a given object. It will be found that it is only on very rare occasions that he can accomplish much with powers which, perhaps only on two or three nights in a year in this climate, tell to great advantage; though it sometimes happens that the employment of an eyepiece, otherwise unsuitable for the night, will, during a short spell of good definition, afford a fleeting glimpse of some difficult feature, and thus solve a doubtful point. It has often been said that the efficiency of a telescope depends to a great extent on "the man at the eye end." This is as true in the case of the moon as it is in other branches of observational astronomy.

Observers, especially beginners, frequently fall into great error in failing to appreciate the true character of what they see. In this way a shallow surface depression, possibly only a few feet below the general level of the neighbouring country, is often described as a "vast gorge," because, under very oblique light, it is filled with black shadow; or an insignificant hillock is magnified into a mountain when similarly viewed. Hence the importance, just insisted on, of studying lunar features under as many conditions as possible before finally attempting to describe them.

However indifferent a draughtsman an observer may be, if he endeavours to portray what he sees to the best of his ability, he will ultimately attain sufficient skill to make his work useful for future reference: in any case, it will be of more value than a mere verbal description without a sketch. Doubt and uncertainty invariably attend to a greater or less extent written notes unaccompanied by drawings, as some recent controversies, respecting changes in Linne and elsewhere, testify. Now that photographs are generally available to form the basis of a more complete sketch, much of the difficulty formerly attending the correct representation of the outline and grosser features of a formation has been removed, and the observer can devote his time and attention to the insertion and description of less obvious objects.

PROGRESS OF SELENOGRAPHY -- Till within recent years, the systematic study of the lunar surface may be said to have been confined, in this country at any rate, to a very limited number of observers, and, except in rare instances, those who possessed astronomical telescopes only directed them to the moon as a show object to excite the wonder of casual visitors. The publication of Webb's "Celestial Objects" in 1859, the supposed physical change in the crater Linne, announced in 1866, and the appearance of an unrecorded black spot near Hyginus some ten years later, had the effect of awakening a more lively interest in selenography, and undoubtedly combined to bring about a change in this respect, which ultimately resulted in the number of amateurs devoting much of their time to this branch of observational astronomy being notably increased. Still, large telescopes, as a rule, held aloof for some unexplained reason, or were only employed in a desultory and spasmodic fashion, without any very definite object. When the Council of the British Association for the Advancement of Science, stimulated by the Linne controversy, deemed the moon to be worthy of passing attention, observations, directed to objects suspected of change (the phenomena on the floor of Plato) were left to three or four observers, under the able direction of Mr. Birt, the largest instruments available being an 8 1/4 inch reflector and the Crossley refractor of 9 inches aperture! During the last decade, however, all this has been changed, and we not only have societies, such as the British Astronomical Association, setting apart a distinct section for the systematic investigation of lunar detail, but some of the largest and most perfect instruments in the world, among them the noble refractor on Mount Hamilton, employed in photographing the moon or in scrutinising her manifold features by direct observation. Hence, it may be said that selenography has taken a new and more promising departure, which, among other results, must

lead to a more accurate knowledge of lunar topography, and settle possibly, ere long, the vexed question of change, without any residuum of doubt.

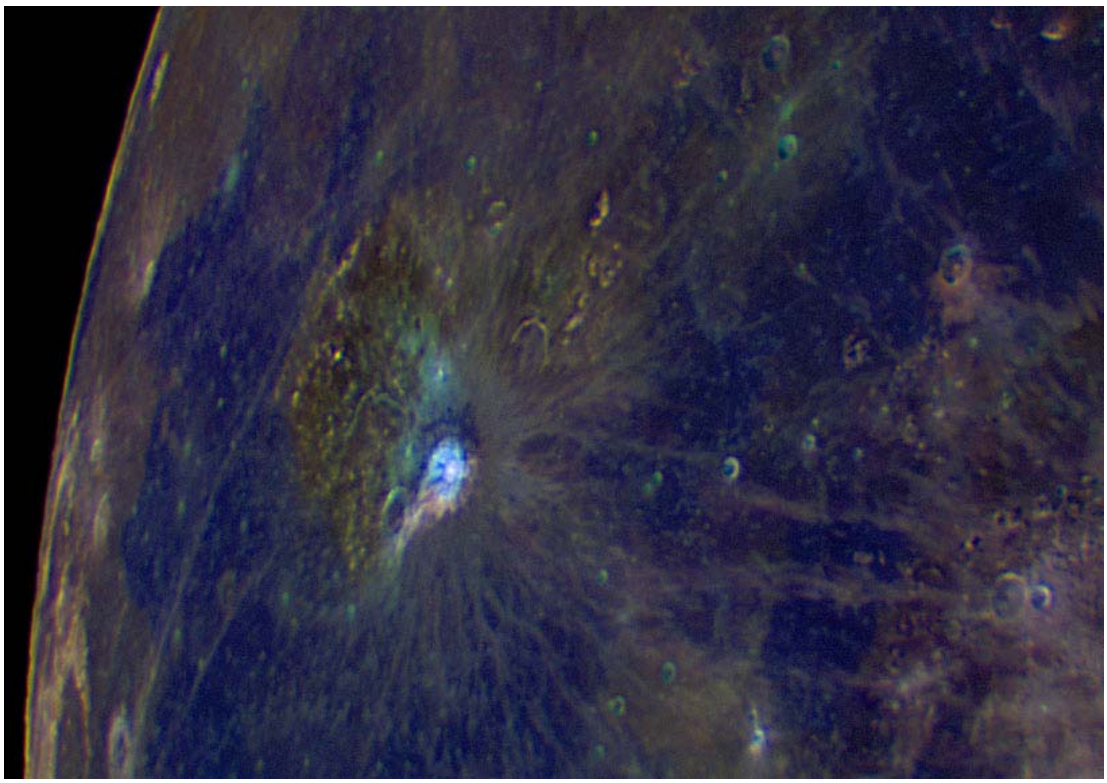
Lunar photography as exemplified by the marvellous and beautiful pictures produced at the Lick Observatory under the auspices of Dr. Holden, and the exquisite enlargements of them by Dr. Weinek of Prague; at Paris by the brothers Henry; and at Brussels by M. Prinz; point to the not far distant time when we shall possess complete photographic maps on a large scale of the whole visible disc under various phases of illumination, which will be of inestimable value as topographical charts. When this is accomplished, the observer will have at his command faithful representations of any formation, or of any given region he may require, to utilise for the study of the smaller details by direct observation.

Desultory and objectless drawings and notes have hitherto been more or less characteristic of the work done, even by those who have given more than ordinary attention to the moon. Though these, if duly recorded, are valuable as illustrating the physical structure, the estimated brightness under various phases, and other peculiarities of lunar features, they do not materially forward investigations relating to the discovery of present lunar activity or to the detection of actual change. It is reiterated _ad nauseam_ in many popular books that the moon is a changeless world, and it is implied that, having attained a state when no further manifestations of internal or external forces are possible, it revolves round the earth in the condition, for the most part, of a globular mass of vesicular lava or slag, possessing no interest except as a notable example of a "burnt-out planet." In answer to these dogmatic assertions, it may be said that, notwithstanding the multiplication of monographs and photographs, the knowledge we possess, even of the larger and more prominent objects, is far too slight to justify us in maintaining that changes, which on earth we should use a strong adjective to describe, have not taken place in connection with some of them in recent years. Would the most assiduous observer assert that his knowledge of any one of the great formations, in the south-west quadrant, for example, is so complete that, if a chasm as big as the Val del Bove was blown out from its flanks, or formed by a landslip, he would detect the change in the appearance of an area (some three miles by four) thus brought about, unless he had previously made a very prolonged and exhaustive study of the object? Or, again, among formations of a different class, the craters and crater-cones; might not objects as large as Monte Nuovo or Jorullo come into existence in many regions without any one being the wiser? It would certainly have needed a persistent lunar astronomer, and one furnished with a very perfect telescope, to have noted the changes that have occurred within the old crater-ring of Somma or among the Santorin group during the past thirty years, or even to have detected the effects resulting from the great catastrophe in A.D. 79, at Vesuvius; yet these objects are no larger than many which, if they were situated on our satellite, would be termed comparatively small, if not insignificant.

One of the principal aims of lunar research is to learn as much as possible as to the present condition of the surface. Every one qualified to give an opinion will admit that this cannot be accomplished by roaming at large over the whole visible superficies, but only by confining attention to selected areas of limited extent, and recording and describing every object visible thereon, under various conditions of illumination, with the greatest accuracy attainable. This plan was suggested and inaugurated nearly thirty years ago by Mr. Birt, under the patronage of the British Association; but as he proposed to deal with the entire disc in this way, the magnitude and ambitious character of the scheme soon damped the ardour of those who at first supported it, and it was ultimately abandoned. It was, however, based on the only feasible principle which, as it seems to the writer, will not result in doubt and confusion. Now that photography has come to the assistance of the observer, Mr. Birt's proposal, if confined within narrower limits, would be far less arduous an undertaking than before, and might be easily carried out. A complete photographic survey of a few selected regions, as a basis for an equally thorough and exhaustive Scrutiny by direct observation, would, it is believed, lead to a much more satisfactory and hopeful method for ultimately furnishing irrefragable testimony as to permanency or change than any that has yet been undertaken.

FALSE COLOR IMAGE OF ARISTARCHUS AREA

By Wayne Bailey



Digital image by Wayne Bailey - Sewell, New Jersey, USA
December 10, 2006 - 07:05 UT
Solar Colongitude: 149.6 - Latitude: 1.5
Celestron 11 inch f/10 SCT - Lumenera Skynyx 2-1M Camera

Here's a false color image of the Aristarchus area. The filters used were Schuler IR83, R, and U. This is the longest wavelength baseline I have. Initial color balance was adjusted to approximate an overall grey average color, then the color saturation was increased and the color balance adjusted slightly to increase the color contrast. Even though there are three banded craters in the image (Aristarchus, Bessarion, & Brayley) I decided not to submit it on the BCP form, since I don't intend to routinely try to produce color images. There are too many variables to create reproducible results. Even seeing variations between individual images influence the final colors. At this stage, this type of color image seems best used as a qualitative indicator of interesting features. That said, the general features of the image compare well with false color Clementine images. Also, the ray contrast seems higher on this image than any of the others that I've taken. I'm not sure whether this is a result of the filter combination (probably not entirely since other images with the same filters don't emphasize the rays as much), processing differences, seeing conditions, or variations in the phase curve in different filters. I don't have images at enough different conditions to decide. In any case, it makes an interesting picture of the most colorful area on the moon.

PYROCLASTIC DEPOSITS NEAR BAILY

By Howard Eskildsen

What appear to be pyroclastic deposits by Baily, a ruined crater north of Lacus Mortis, are marked by arrows in a photo I recently captured (Figure 1). The overhead sunlight emphasized the albedo differences. East of Baily, the central part of the dark deposit seems to have a crater or cleft. The Clementine image (Figure 2) shows this to be a rille, and suggests that this could be a source for the dark material. Another rille or crater chain appears as a possible source of the dark material west of Baily, but is not visible in my photo. The Clementine image also shows another rille trending from the right side of the photo towards Baily. Might it link with the breach in Baily's eastern wall? It also appears that the dark albedo features have been partly covered by numerous rays emanating from multiple directions.

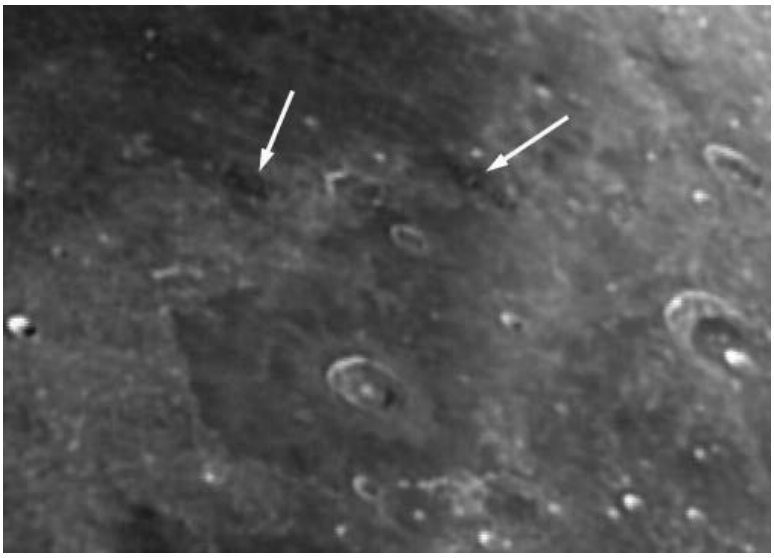


FIGURE 1 - Digital image by Howard Eskildsen - Ocala, Florida, USA
December 1, 2006 - 01:29 UT - Seeing: 6/10 - Trans: 4/6
Meade 6 inch f/8 Refractor - 2x Barlow - IR Blocking filter - NexImage Camera

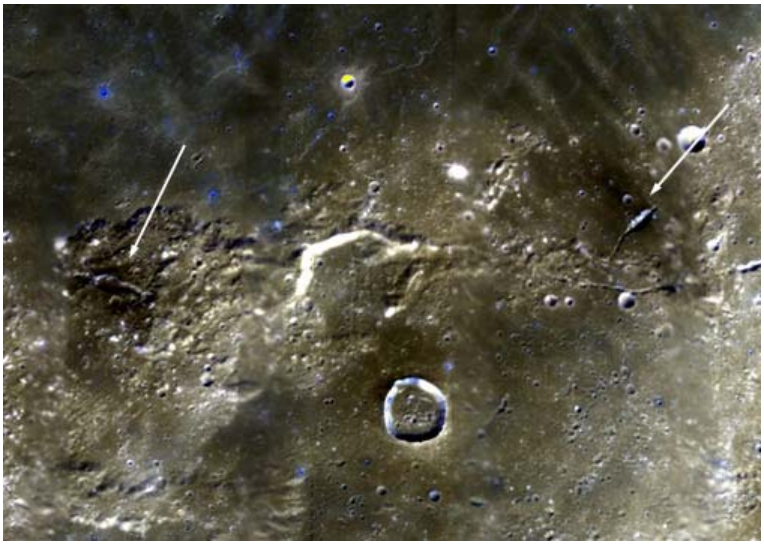


FIGURE 2
NASA Clementine Image - USGS PDS MAP-A-PLANET MOON

LUNAR TOPOGRAPHICAL STUDIES

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

OBSERVATIONS RECEIVED

WAYNE BAILEY - SEWELL, NEW JERSEY, USA
Digital Images of Aristarchus region, Theophilus, Petavius & Furnerius, Strabo to Mare Crisium
Banded Crater Forms with digital images of Aratharchides-A (9)

MAURICE COLLINS - PALMERSTON NORTH, NEW ZEALAND
Observing notes from April 25 to May 5
Digital images of Aristarchus region (2), Full disc views of Moon throughout the lunation (6), Mare Humboldtianum (2), Aristarchus & Reiner gamma, Mare Crisium (2), Grimaldi & Mare Orientale, Langrenus, Eastern hemisphere, Northwest quadrant,

FRED CORNO - SETTIMO TORINESE, ITALY
Drawings of Theophilus, Stofler

ED CRANDALL - WINSTON-SALEM, NORTH CAROLINA, USA
Digital images of Theophilus region (3)

HOWARD ESKILDSEN - OCALA, FLORIDA, USA
Digital images of Northeastern quadrant, Eastern hemisphere, Copernicus, Mare Tranquilitatis, Mare Nubium
Banded Crater Forms with digital images of Ariadaeus (4), Burg (4), Dawes (2), Menelaus (3), Messier (3), Proclus (4), Menelaus (2), Silberschlag, Aristillus (2), Birt (2), Bode (2), Conon (2), Pytheas (2), Kepler, Aristarchus (4), Thaeatetus

RALPH GESCHWIND - MASSILLON, OHIO, USA
Photograph (film) of 6-day Moon

ACHILLE GIARDANO - NAPLES, ITALY
Digital images of Theophilus (2)

ROBERT H. HAYS, JR. - WORTH, ILLINOIS, USA
Drawings of Bullialdus & vicinity, Noggerath, Nearch B & C

RIK HILL - TUCSON, ARIZONA, USA
Digital images of Langrenus to Petavius, Vallis Rheita, Aristarchus, Babbage, Marius to Kepler, Grimaldi to Hevelius, Carpenter to Pythagorus

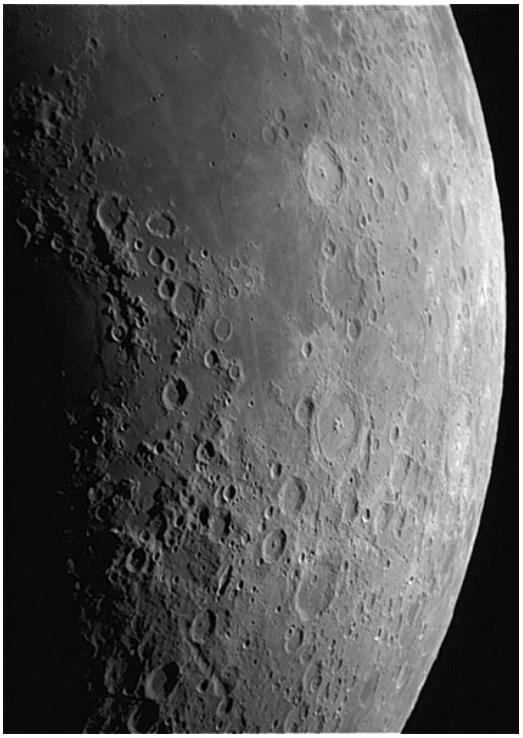
PAULO LAZZAROTTI - MASSA, ITALY
Digital images of Southeastern limb, Janssen

RECENT TOPOGRAPHICAL OBSERVATIONS

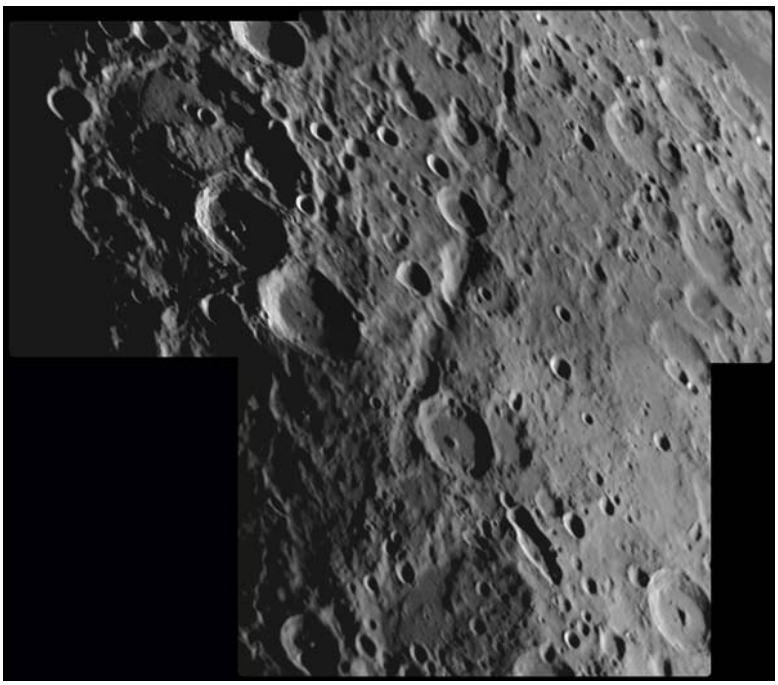
PETAVIUS & FURNERIUS
Digital mosaic by Wayne Bailey - Sewell, New Jersey, USA
April 21, 2007 - 02:18 - 02:30 UT - Colongitude: 314.0
Seeing: 3/10 - Trans: 4/6 - Schuler IR72 Filter
Celestron C-11 f/10 SCT - Lumenera Skynyx 2-1M

MARE SERENITATIS & TRANQUILITATIS
Digital image by Maurice Collins
Palmerston North, New Zealand
May 5, 2007 - 08:53 UT
Meade ETX90 3.5 inch Maksutov-Cassegrain

RECENT TOPOGRAPHICAL OBSERVATIONS



EASTERN MOON
Digital image by Howard Eskildsen
Ocala, Florida, USA
April 22, 2007 - 01:23 UT
Seeing: 7/10 - Trans: 4/6
Meade ETX-125 5 inch Maksutov-Cassegrain
Orion StarShoot II

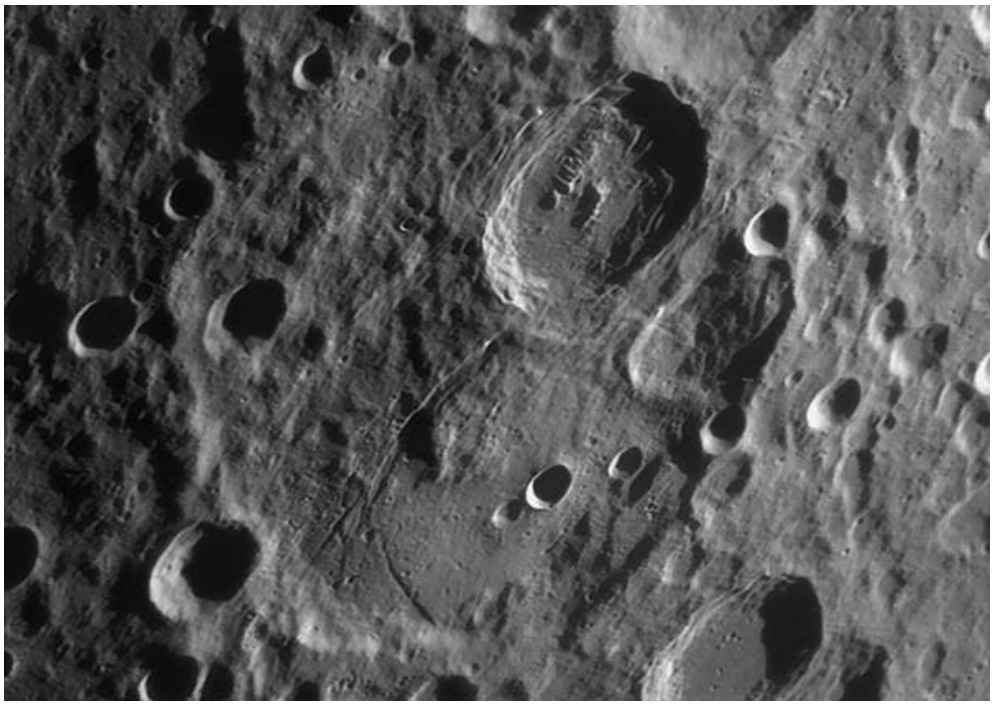


VALLIS RHEITA
Digital image by Rik Hill - Tucson, Arizona, USA
April 22, 2007 - 03:00 UT
Celestron C14 14 inch f/10 SCT - Prime focus
SPC900NC Camera - Wratten 21 filter - 150/1500 images

RECENT TOPOGRAPHICAL OBSERVATIONS

STOFLER
Drawing by Fred Corno
Settimo Torinese, Italy
March 17, 2005 - 21:15 to 22:10 UT
Seeing: 6/10 - Trans: 6/6
Vixen 102m 4" f/9.8 Refractor
Vixen 7mm Ortho (216x)

Observing Notes: The purpose of the observation was to identify on the crater floor the white stripes due to the deposition of Tycho rays. If I am not wrong, they are actually present as brighter shades in the main crater, crossing from top left to bottom right in the drawing.

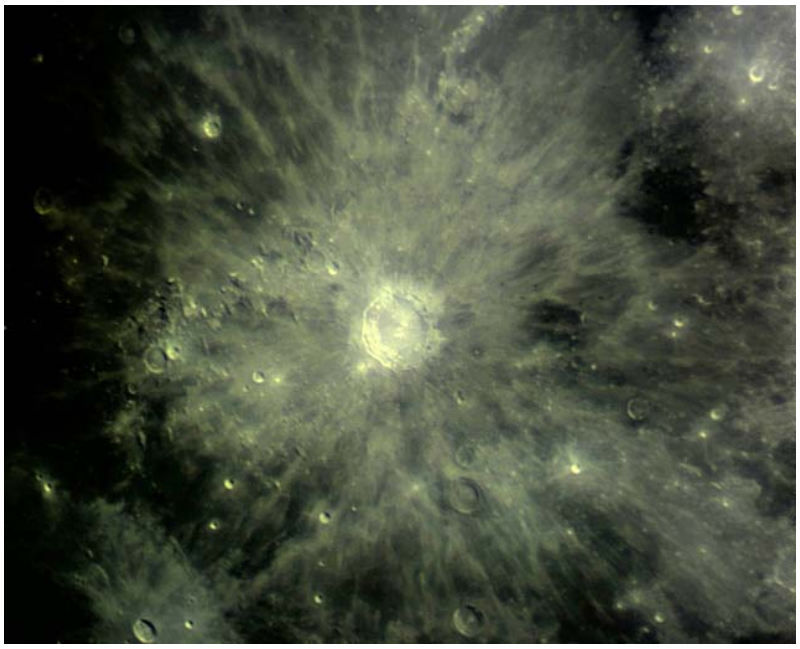


JANSSEN
Digital image by Paolo Lassarotti - Pisa, Italy
April 22, 2007 - 18:31 UT - Seeing: 6-7/10 - Trans: 4/5
Gladius CF-315 Lazzarotti Opt. scope - Lumenera Infinity 2-1 Camera
0.12 arcsec/pixel image scale - 50 msec. exposure - 130/2000 frames

BRIGHT LUNAR RAYS PROJECT

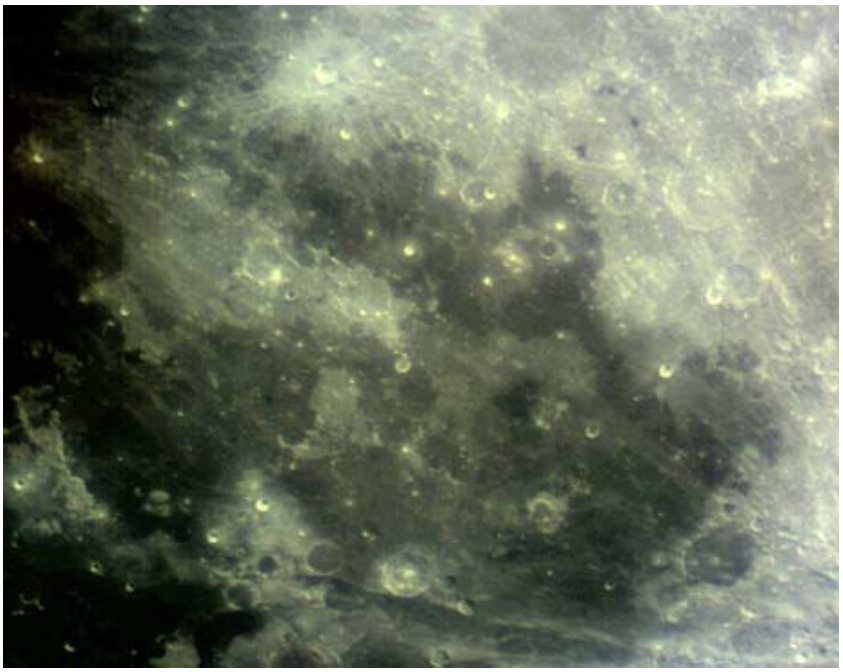
Coordinator - Willliam M. Dembowski, FRAS

RECENT RAY OBSERVATIONS



COPERNICUS SYSTEM
Digital image by
Howard Eskildsen
Ocala, Florida, USA
April 30, 2007 - 00:40 UT
Seeing: 6/10 - Trans: 4/6
Meade 6 inch f/8 Refractor
5x Barlow
Orion StarShoot II Camera

MARE NUBIUM
Digital image by
Howard Eskildsen
Ocala, Florida, USA
April 30, 2007 - 00:42 UT
Seeing: 6/10 - Trans: 4/6
Meade 6 inch f/8 Refractor
5x Barlow
Orion StarShoot II Camera



BANDED CRATERS PROGRAM

Coordinator - Willliam M. Dembowski, FRAS

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

NOTE FROM PROGRAM COORDINATOR:

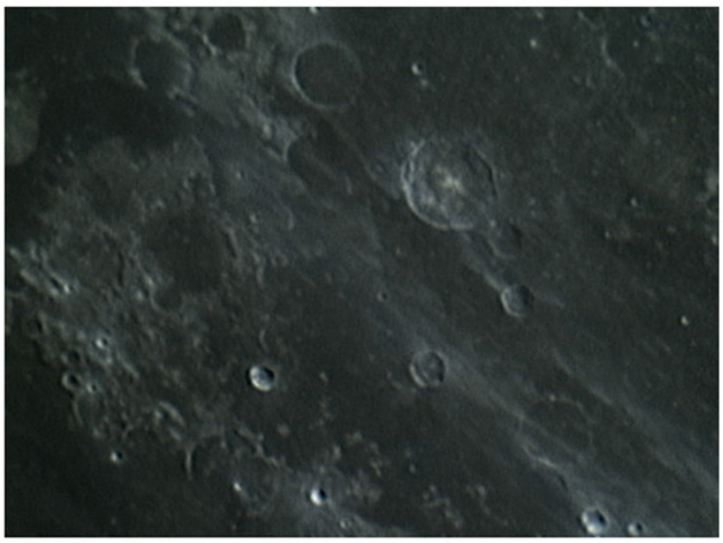
In order to maximize the data submitted to the Banded Crater Program (BCP) observations should be submitted on the forms provided on the BCP Website. A digitized version for use with Adobe Photoshop and Photoshop Elements is now available. Unfortunately, files in this format cannot be uploaded to the BCP website but they can be obtained via email from the Program Coordinator. The Photoshop forms were used by both of this month's contributors.

As a point of clarification, the crater listed as Agatharchides A on the list of "21 Large Banded Crater" that appears on the BCP Website at **http://www.zone-vx.com/alpo-bcp-21list.pdf** is sometimes referred to as "Moore" in older literature.

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

Crater Observed: Agatharchides A — Comments:
Observer: Wayne Bailey — Observing Station: Sewell, NJ
Mailing Address: 17 Autumn Lane, Sewell, NJ 08080
Telescope: Celestron SCT — 28 cm — f/10
Imaging: Phillips Toucam 840 — Filters: IR-UV Block
Seeing: 4/10 — Transparency: 4/6
Date (UT): 2006/02/11 — Time (UT): 03:18
Colongitude: 64.2 — Latitude: -1.1
Position of crater: — Selen. Long. 28.4° West — Selen. Lat. 23.2° South
Lunar Atlas Used as Reference: Rukl, Atlas of the Moon, Revised Updated Ed.

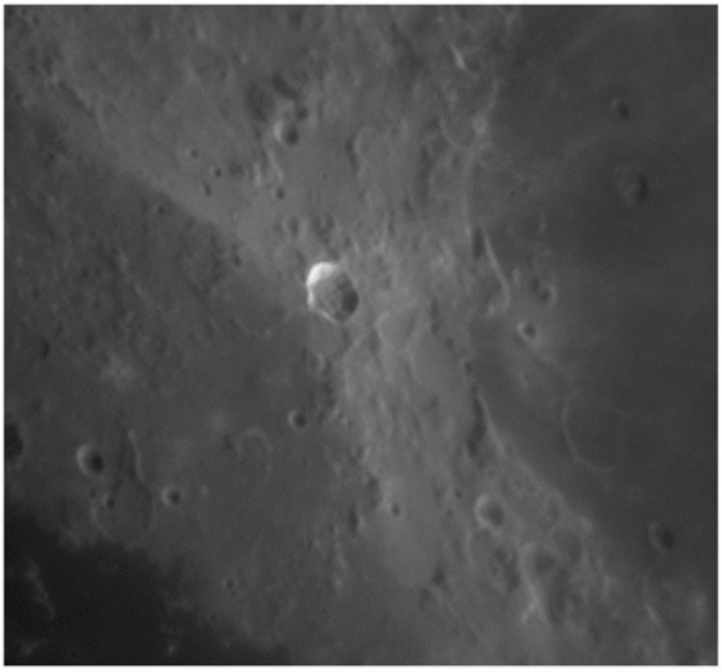
Image (North up): (East right):



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

Crater Observed: Proclus
Observer: Howard Eskildsen Observing Station: Ocala, Florida
Mailing Address: P.O. Box 830415, Ocala, Florida, 34483
Telescope: Meade Refractor 15.2 cm f/8
Imaging: NexImage, 5X TeleXtender Filters: IR Block Filter
Seeing: 7/10 Transparency: 5/6
Date (UT): 2007/04/24 Time (UT): 00:39
Colongitude: 350.1
Position of crater: Selen. Long. Selen. Lat.
46.8° East 16.1° North
Lunar Atlas Used as Reference: Virtual Moon Atlas Expert Version 2.1 2004-11-07

Image (north up):



Comments:

Three bright bands trend in the direction of the northeastern ray; a single bright band trends in the direction of the southeatern ray at the 5 o'clock position. A dark area lies at the 12 o'clock postion against the otherwise bright portion of the northern rim. It will be interesting to watch these areas in subsequent photos that I have already taken during this lunation.

LUNAR TRANSIENT PHENOMENA

Coordinator – Dr. Anthony Cook – acc@cs.nott.ac.uk
Assistant Coordinator – David O. Darling - DOD121252@aol.com

LTP NEWSLETTER - JUNE 2007

Dr. Anthony Cook - Coordinator

Observations were received from the following observers for April: Jay Albert (FL, USA), Clive Brook (Plymouth, UK), Marie Cook (Mundesley, UK), Maurice Collins (New Zealand), and Gerald North (Narborough, UK) and myself (Nottingham, UK). No LTP were reported for April.

I have had several inquires about LTP from researchers at different universities over the last month: University of Arizona, Brown University, and the Technical University of Berlin. So I would imagine that with the renewed interest, from near term international space missions that the mystery of LTPs will either be solved or we will be provided with some new theories on what lunar surface processes could be seen from Earth. For our part, I will try to ensure that we filter out (or weight) unreliable reports from the existing LTP catalog and put the remainder on-line for researchers at universities to use in their studies.

This month's article is shorter than normal due to pressure of marking coursework and exams at University – normal service will be resumed next time! I would however like to apologize though for some exponents that went missing in last month's article concerning metric tonnes of water, these should have read: "Ong et al" (University of California) made some theoretical calculations on volatile retention from comet impacts and found that between 1.3×10^7 and 1.1×10^{10} metric tons of water could potentially make it into, and be retained in, cold traps at the lunar poles. This is in good agreement with the Hydrogen values of 6×10^{10} metric tons as determined by the lunar Prospector space probe."

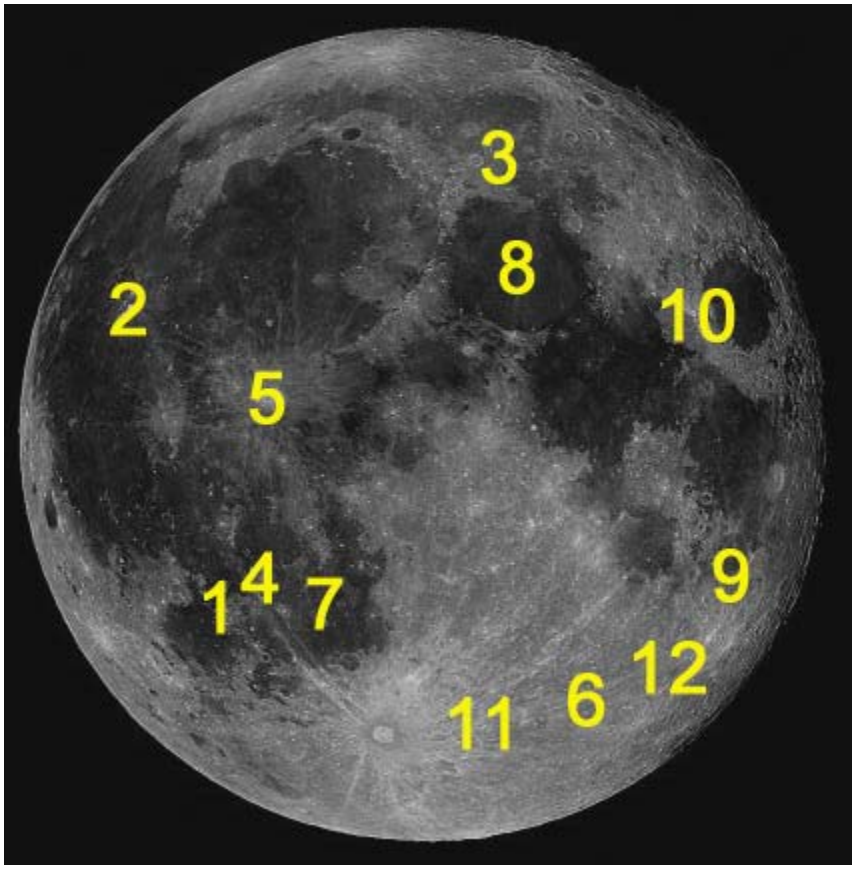
Repeat Libration/illumination LTP predictions, including the more numerous illumination only events can be found on the following web site: http://www.lpl.arizona.edu/~rhill/alpo/lunarstuff/LTP.html

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!

Dr Anthony Cook, School of Computer Science & IT, Nottingham University, Jubilee Campus, Wollaton Road, Nottingham, NG6 1BB, UNITED KINGDOM. Email: acc@cs.nott.ac.uk

KEY TO IMAGES IN THIS ISSUE

1. Agatharchides A
2. Aristarchus
3. Baily
4. Bullialdus
5. Copernicus
6. Janssen
7. Mare Nubium
8. Mare Serenitatus
9. Petavius
10. Proclus
11. Stofler
12. Vallis Rheita



THE MOON IN THE NEWS

(Space.com) Early moon photos revealed more than was known:
http://www.space.com/scienceastronomy/070514_moon_images.html

(New Scientist) No one scoops the prize at moon digger contest:
http://space.newscientist.com/article/dn11846-no-one-scoops-the-prize-at-moon-digger-contest.html

(New Scientist) Mock lunar lander hovers for record time:
http://space.newscientist.com/article/dn11851-mock-lunar-lander-hovers-for-record-time.html

(Wired) A plan to build a giant liquid telescope on the moon:
http://www.wired.com/science/space/news/2007/05/liquid_telescope

(TechNewsWorld) China to take first moon shot by end of 2007
http://www.technewsworld.com/story/BBKIzXtyH8t6ST/China-to-Take-First-Moon-Shot-by-End-of-2007.xhtml