THE LUNAR OBSERVER

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

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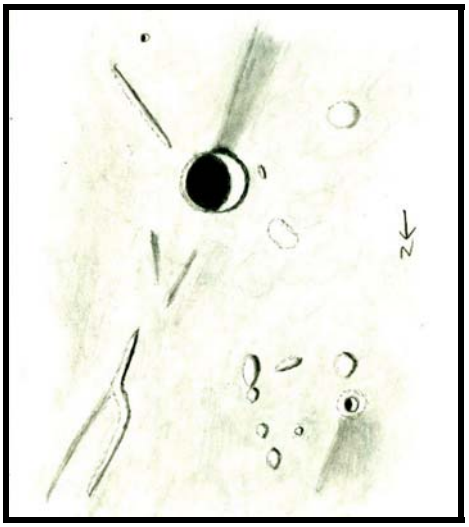
RECENT BACK ISSUES: http://moon.scopesandscapes.com/tlo_back.html

FEATURE OF THE MONTH – APRIL 2012

NICOLLET



Sketch and text by Robert H. Hays, Jr. - Worth, Illinois, USA
November 5, 2011 01:34-02:00 UT, 15 cm refl, 170x, seeing 8-9/10

I drew this crater and vicinity on the evening of Nov. 4/5, 2011 between two occultations. This crater is in Mare Nubium west of Birt. Nicollet is an ordinary-looking round crater. There is some extended exterior shadow near its south end which leads into a dusky streak. This streak is darkest along its east edge. I think of this as a 'negative ray' since it looks like an ordinary ray, but is darker than the local terrain instead of lighter. A straight narrow ridge is southeast of Nicollet, and the pit Nicollet D is near the ridge's southern end. The peak Nicollet epsilon is just west of Nicollet, and a shadowless bright patch is to their northwest. Another bright patch is farther to the west, but this feature has some weak shading on its west side, indicating some sort of elevation, perhaps a dome. Two short strips of shadow are northeast of Nicollet, and the long curving ridge Nicollet psi is farther to the northeast. This ridge has its darkest shadowing at its south end. A fuzzy strip of shadow extends northward from one of the kinks of Nicollet psi, but I saw no indication of sunlit slope there. Nicollet B is the modest crater to the northwest amid a jumble of peaks. This crater is surrounded by a halo, and there is a fan-shaped dusky area extending northward. This area appears darkest along its east edge, much like the 'negative ray' south of Nicollet. The large peak just south of

Nicollet B is Nicollet beta. The east-west elongated peak nearby is Nicollet phi, and Nicollet delta is just east of phi, and is elongated north-south. There is a scattering of smaller peaks to their north.

ERRATUM: There are two OCR transcription errors in the March 2012 TLO Feature of the Month text that I missed in proofreading. The features described as Lansberg P and O should be Lansberg F and D respectively. Mr. Hays' original text described them correctly. The web version has been corrected.

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LUNAR CALENDAR

APRIL-MAY 2012 (UT)

Apr. 03	22:00	Moon 8.3 Degrees SSW of Mars
Apr. 06	19:19	Full Moon
Apr. 07	10:00	Moon 6.0 Degrees SSW of Saturn
Apr. 07	17:00	Moon at Perigee (358,313 km – 222,645 miles)
Apr. 10	21:06	Extreme South Declination
Apr. 12	08:00	Moon 1.3 Degrees SSW of Pluto
Apr. 13	10:50	Last Quarter
Apr. 16	10:00	Moon 5.7 Degrees NNW of Neptune
Apr. 18	21:00	Moon 7.0 Degrees NNW of Mercury
Apr. 19	03:00	Moon 5.2 Degrees NNW of Uranus
Apr. 21	07:19	New Moon (Start of Lunation 1105)
Apr. 22	09:01	Moon at Apogee (406,420 km – 252,538 miles)
Apr. 22	19:00	Moon 2.5 Degrees N of Jupiter
Apr. 25	05:36	Extreme North Declination
Apr. 25	02:00	Moon 5.7 Degrees S of Venus
Apr. 29	09:57	First Quarter
May 01	07:00	Moon 7.3 Degrees SSW of Mars
May 04	20:00	Moon 6.2 Degrees S of Saturn
May 06	03:34	Moon at Perigee (356,953 km – 221,800 miles)
May 06	03:35	Full Moon
May 08	06:18	Extreme South Declination
May 09	20:00	Moon 1.5 Degrees ESE of Pluto
May 12	21:47	Last Quarter
May 13	19:00	Moon 5.9 Degrees NNW of Neptune
May 15	22:00	Moon 1.1 Degree ESE of asteroid 2-Pallas
May 16	13:00	Moon 5.2 Degrees NNW of Uranus
May 19	16:14	Moon at Apogee (406,450 km – 252,556 miles)
May 20	04:00	Moon 2.1 Degrees NNW of Mercury
May 20	14:00	Moon 1.8 Degrees N of Jupiter
May 20	23:47	New Moon (Start of Lunation 1106)
May 22	11:12	Extreme North Declination
May 22	22:00	Moon 4.7 Degrees S of Venus
May 28	20:15	First Quarter
May 29	05:00	Moon 6.5 Degrees SSW of Mars

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

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

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

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

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

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

When submitting observations to the A.L.P.O. Lunar Section

In addition to information specifically related to the observing program being addressed, the following data should be included (**Bold items are required)**:

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

CALL FOR OBSERVATIONS:
FOCUS ON: Pyrenees Mountains

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 **May 2012** edition will be **the Pyrenees Mountains**. 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 the **Pyrenees** to your observing list and send your favorites to:

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

Deadline for inclusion in the Pyrenees Mountains article is April 20, 2011

FUTURE FOCUS ON ARTICLES:

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

Bullialdus	**July 2012**	**June 20, 2012**
Aristillus	**September 2012**	**August 20, 2012**

ALPO Meeting and Call for Papers at the 2012 ALCon

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

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

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LUNAR TOPOGRAPHICAL STUDIES

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

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

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

OBSERVATIONS RECEIVED

ORLANDO BENITEZ SANCHEZ-CANARY ISLANDS, SPAIN. Digital images Albategnius, Anaxagorus area, Aristilus, Autolycus, Barrow, Clavius, Copernicus, Eratosthenes, Fracastorius, Mare Serenitatis, Mons Hadley, Mons Pico, Mons Piton, Montes Appeninus, Rima Hyginus, Rupes Recta(4) and Walter(2).

MAURICE COLLINS - PALMERSTON NORTH, NEW ZEALAND. Digital images of 4, 5, 6, 11, 12, 16, 23, 24 & 25 day moon.

ED CRANDALL – LEWISVILLE, NORTH CAROLINA, USA. Digital images of Aristoteles and Atlas-Hercules

JOHN DUCHEK – CARRIZOZO, NEW MEXICO, USA. Digital image of Montes Pyrenaeus.

HOWARD ESKILDSEN - OCALA, FLORIDA, USA. Digital image. of Plato-Vallis Alpes.

PETER GREGO – ST. DENNIS, CORNWALL, UK. Drawings of Encke and Menelaus(4).

HAYS, ROBERT - WORTH, ILLINOIS, USA. Drawings of Markov and Maskelyne.

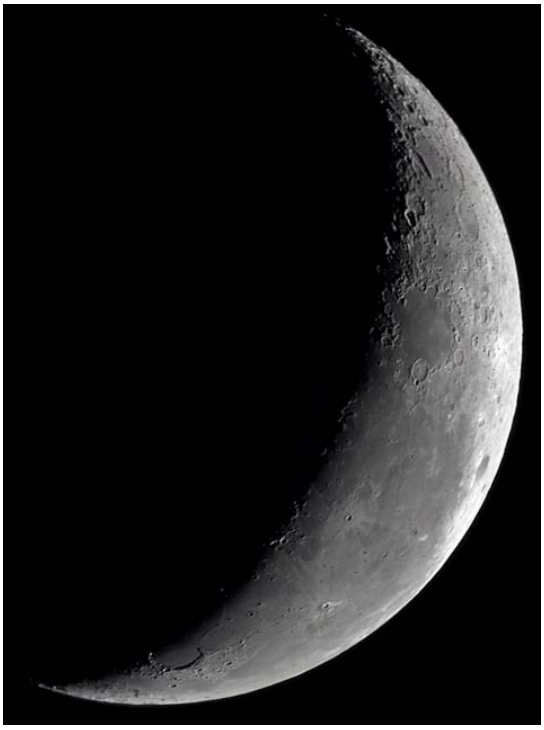
RICHARD HILL – TUCSON, ARIZONA, USA Digital image of Aristoteles-Eudoxus, Flammariaon-Arzachel and Meton-Barrow.

ANTONIUS J SCHALKEN – MELBOURNE, VICTORIA, AUSTRALIA Digital images of Montes Pyrenaeus(2).

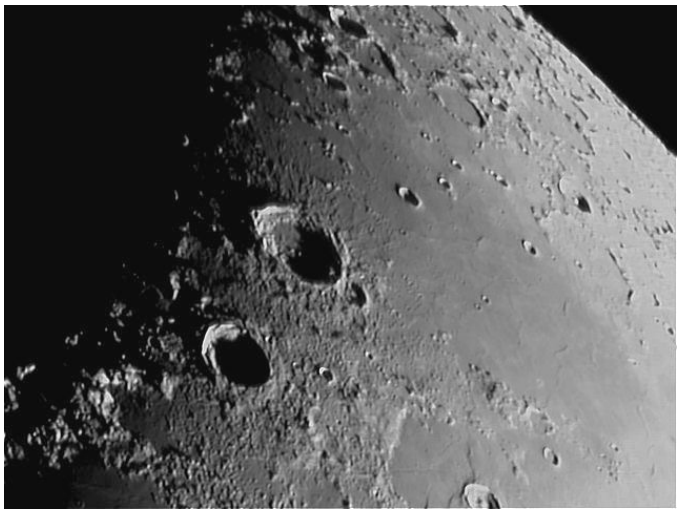
HONGSUN YOON –SEOUL, REPUBLIC OF KOREA. Digital image of Montes Pyrenaeus.

RECENT TOPOGRAPHICAL OBSERVATIONS

MARE SERENITATIS - Orlando Benitez Sanchez-Canary Islands, Spain. February 12, 2012 00:46 UT. Seeing 5/10, Transparency 4/10, Colongitude 145°. SCT 235mm, f/10, DMK21AU04.AS no filter.



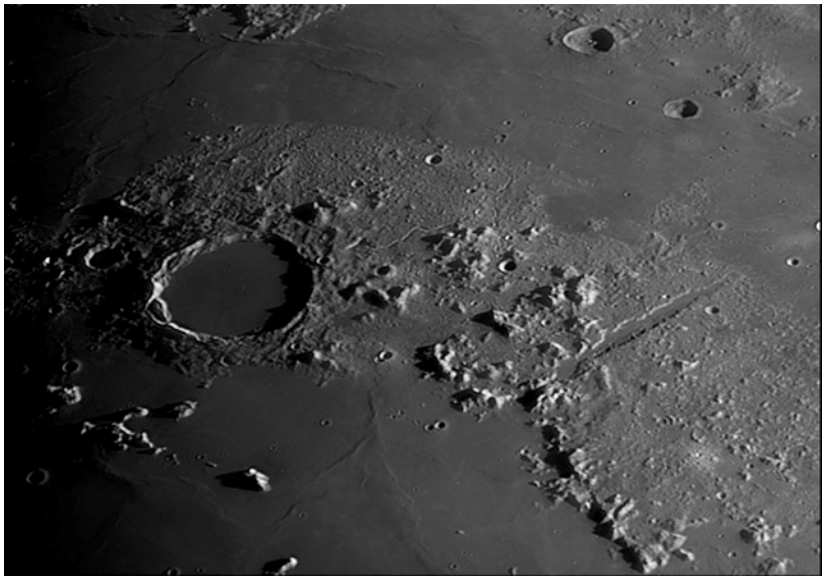
25-day MOON - Maurice Collins-Palmerston North, New Zealand. March 17, 2012 17:57-18:09 UT. ETX-90, LPI.



ARISTOTELES – Ed Crandall – Lewisville, North Carolina, USA. December 1, 2011 23:14 UT. 110 mm f/6.5 APO, 3x barlow, ToUcam.

RECENT TOPOGRAPHICAL OBSERVATIONS

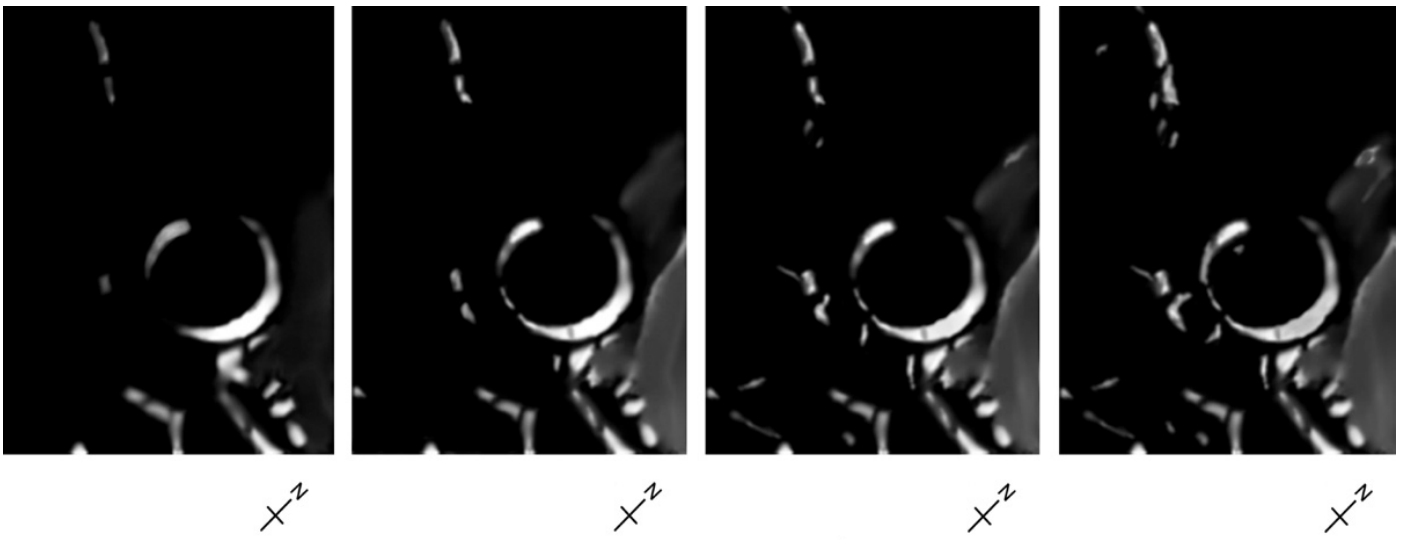
MONTES PYRENAEUS-John Duchek-St. Louis, Missouri, USA. March 29, 2012 02:30 UT. Seeing 5/10, transparency 3/6. 6" open tube Newtonian, f/8, 2.5x barlow. Canon Tli 500D. color enhanced.



PLATO & VALLIS ALPES - Howard Eskildsen-Ocala, Florida, USA. March 2,2012 00:49 UT. Seeing 9/10, Transparency 5/6. 6" f/8 refractor, Explore Scientific lens, 2X Barlow, DMK 41AU02.AS, IR block & V block filters.

Ever see the central rille in the Alpine Valley through 6" aperture? I could actually see it on the computer screen as the image was being aquired. Seeing was almost perfect

RECENT TOPOGRAPHICAL OBSERVATIONS

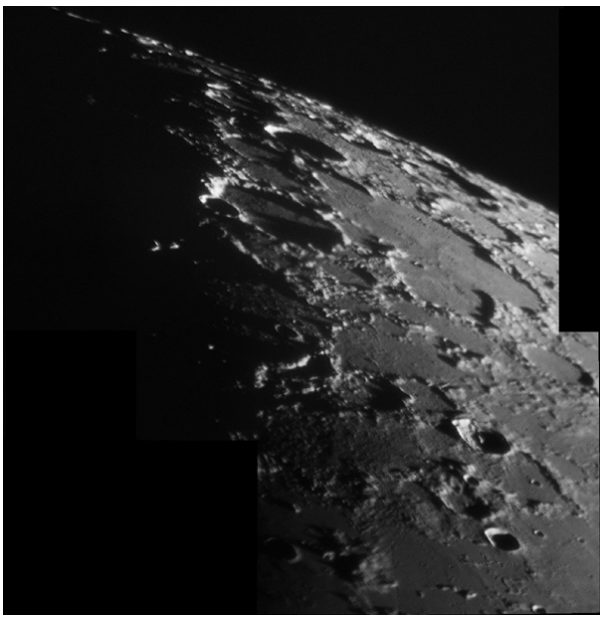


MENELAUS – Peter Grego, St. Dennis, Cornwall, UK. March 28, 2012 UT. Seeing AII- clear-no wind. 100 mm refractor, 132x, integrated light.

Time (UT. (left to right): 19:45-20:00 UT; 20:25-20:38 UT; 21:10-21:22 UT; 21:40-21:51 UT
Colongitude (left to right). 342.6-342.7°; 342.9-343.1°; 343.3-343.4°; 343.6-343.7°

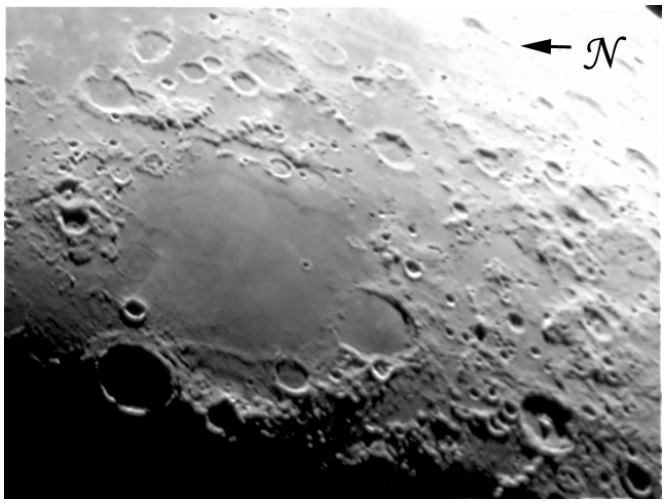
Sunrise over Menelaus. The sequence was sketched on PDA, the first sketch being made freehand without a template. The observations presented here are the original PDA sketches; the only post-observation enhancement has been to increase the dpi, remove moiré and include the relevant text information. At the beginning of the observation it was decided to take in the shadowed area (most of the area covered by the observational drawing) west of Menelaus in order to observe and record any high topographical points which might later become illuminated by the rising Sun. A watch was kept in order to determine when any features on Menelaus' floor might first become visible. When the observation was commenced, Menelaus was firmly in shadow; only a sliver of its inner western wall and a broader crescent of its outer eastern flanks were illuminated by the rising Sun. Initially, the brightest feature visible was the southern part of Menelaus' eastern glacis; the inner western wall appeared far dimmer. However, by the time that the second sketch was made the northern part of the inner western wall had increased to what appeared a similar brightness to Menelaus' eastern flanks, and part of the southern rim had begun to make an appearance. It was obvious, by the time the last observation was made, that the once bright part of the crater's eastern flanks had grown dimmer in comparison with the bright portion of the inner western wall. The last observation also saw the appearance of a small detached point of illumination within the shadow of Menelaus' interior, not very bright, in the west quite close to the illuminated inner wall. The feature was quite obvious and unambiguous, and it was assumed that this must have been one of the crater's interior hills. However, on consulting Rükl's map 23 while writing up these notes is there is no really obvious elevated point in the vicinity of this feature, but it may possibly have been part of the lower inner wall catching sunlight. The northwestern rim failed to appear. A number of other features around Menelaus, both within Mare Serenitatis and along the Montes Haemus, became visible during the session. Notable among them was unnamed dome north of Menelaus (connected to northern Menelaus by a low ridge), extensions to the hills and ridges of Montes Haemus near Sulpicius Gallus B (the crater itself was not clearly seen) and ridges around Lacus Hiemalis.

RECENT TOPOGRAPHICAL OBSERVATIONS

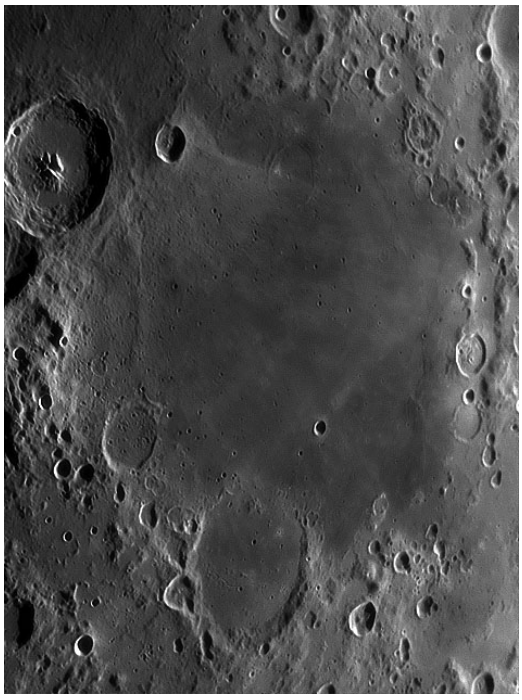


METON & BARROW – Richard Hill – Tucson, Arizona, USA February 29, 2012 01:25 UT. Seeing 8/10. C14, 1.6x barlow, f/17.6, SCT. DMK21AU04. Wratten 23 filter.

Attached is an image of the Meton/Barrow region of the 7.4 day old moon. While Metion is the largest feature, I think Barrow steals the show with it's sunrise v-shaped shaft of light on its floor. I never tire of seeing this feature and can only dream of what it would be like to stand on the mountains near the pass where this is created and see that sunrise cross the crater floor!

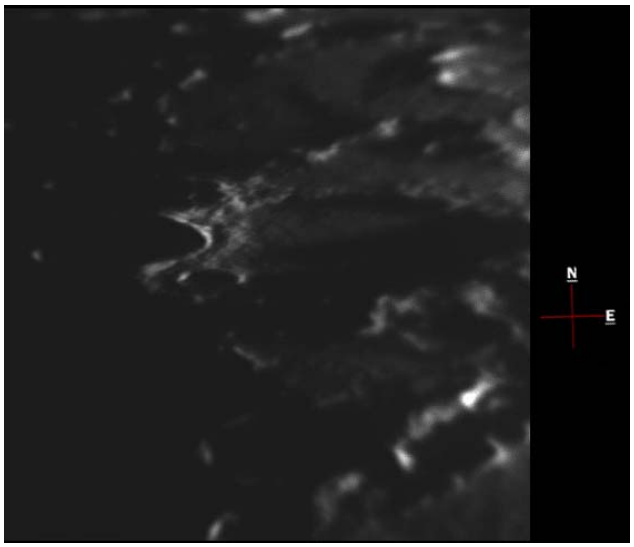


MONTES PYRENAUS - Antonius J Schalken – 'Luar' Observatory, Melbourne, Victoria, Australia. August 10, 2005 08:09 UT. Seeing 7/10, Transparency 5/6, Colongitude 333.9º, .Maksutov 6" f/10, ToUcam Pro II 740K.



MONTES PYRENAEUS- Hongsun Yoon – Republic of Korea. February 20, 2010 09:17 UT. Seeing 8/10, Transparency 4/6. Mewlon 300 f/11.9 Dall-Kirham, 2.5x powermate, Lumenera LU075, Astronomic R dichroic filter with IR block.

ADDITIONAL TOPOGRAPHICAL OBSERVATIONS



BARROW - Orlando Benitez Sanchez-Canary Islands, Spain. February 29, 2012 21:07 UT. Seeing 7/10, Transparency 4/6, Colongitude 2.2°. SCT 235mm, f/30, DMK21AU04.AS. IR-cut filter >700nm.

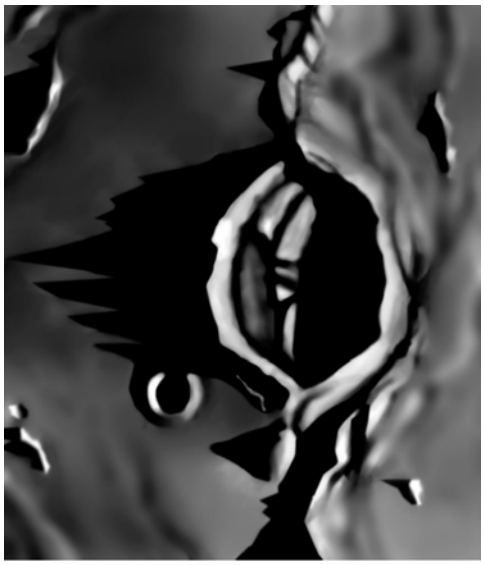
23 day MOON - Maurice Collins-Palmerston North, New Zealand. March 15, 18:16 18:28 UT. ETX-90, LPI.

ATLAS-HERCULES – Ed Crandall – Lewisville, North Carolina, USA. December 1, 2011 23:16 UT. 110 mm f/6.5 APO, 3x barlow, ToUcam.

ADDITIONAL TOPOGRAPHICAL OBSERVATIONS

ENCKE – Peter Grego, St. Dennis, Cornwall, UK. March 3, 2012 UT. 22:00-22:30 UT. Seeing AII-III. Colongitude 39.3-39.6°. 225mm Newtonian, 200x, integrated light. Location: Paul Stephens' observatory, Long Marston, Warwickshire, UK

Further to studies of Encke made on 2009 April 5 and 6, an observation was made with the crater illuminated by an early morning Sun. Distinctly polygonal in outline, about half of the crater's floor was filled with shadow cast by its eastern rim. Several north-south ridges were discerned on Encke's floor, and the western floor at the base of the inner western wall was dark. A kink in the outline of the western rim marked the brightest part of the crater; this was the location of the rim crater Encke N, but it was not obviously crater-like in this view. The western rim cast a serrated shadow to the west, depicted here as it appeared shortly after the observation was commenced; by the end of the observation, however, the shadow had retreated noticeably eastward but retained all the individual shadow peaks. The north part of crater Encke H, southwest of Encke, joined Encke's shadow; it has been depicted a little too large in this drawing. Broad, complex ridges run around the eastern side of Encke; these have not been depicted as accurately as I had hoped. The ridges form the eastern wall of a larger crater, Encke T, in which Encke itself lies.

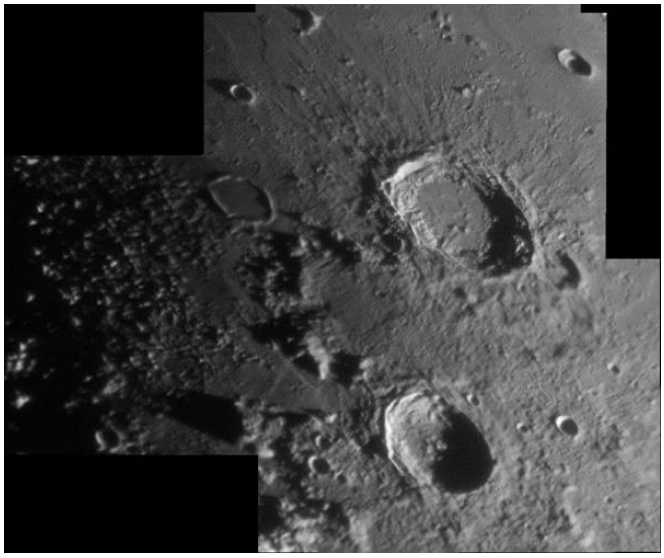


ARZACHEL to FLAMMARION – Richard Hill – Tucson, Arizona, USA March 1, 2012 01:51 UT. Seeing 8/10. DMK21AU04. 656.3nm filter.

Attached you will find an image of the Flammarion to Arzachel region of the moon at sunrise. I was so impressed with the amount of detail shown at this low sun angle especially in Ptolemaeus.

EUDOXUS & ARISTOTELES – Richard Hill – Tucson, Arizona, USA February 29, 2012 01:37 UT. Seeing 8/10. C14, 1.6x barlow, f/17.6 DMK21AU04. Wratten 23 filter.

This time I have one of my best images of Aristoteles and Eudoxus taken on the night of Feb. 28/29 in good seeing with the C14. I did my best to bring out the rilles near Eudoxus. You can also see Vallis Alpes in deep shados near Egede.



LUNAR TRANSIENT PHENOMENA

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

LTP NEWSLETTER – APRIL 2012

Dr. Anthony Cook - Coordinator

Routine observations for February 2012 were received from the following observers: Jay Albert (Lake Worth, FL, USA) observed: Aristarchus, Bessel, Fracastorius, Kepler, Mare Crisium, Maskelyne, Plato, Proclus, Sabine, and Theophilus. Raffaello Braga (Italy) observed Eudoxus, Maskelyne, Maurolycus, and Proclus. Maurice Collins (New Zealand) took an image of Einstein and whole disk images of the Moon. Marie Cook (Mundesley, UK) observed: Eudoxus and Gassendi. I took time lapse video of the Moon and also took video of Earthshine, looking for impact flashes from Aberystwyth University. Rolf Hempel (Germany) took whole disk images of the Moon. Kevin Kilburn (Manchester, UK) imaged Rumker, Sinus Medii, and several features. Norman Izett (New Zealand) took a whole disk image of the Moon. Anthony Jennings (Manchester, UK) imaged a whole disk image of the Moon. Terry King (Southwick, UK) imaged the Montes Apenninus. Nigel Longshaw (Olhham, UK) sketched Aristarchus. Pietre Malinski (Poland) imaged several areas of the Moon. Brendan Shaw (UK) imaged Arago, Aristarchus, Atlas, Censorinus, Linne, Peirce, Piazzi-Smyth, Plato, Poisson, Proclus, Promontorium Agarum, Ptolemaeus, and Ross D.

News: I have received an email from Antonio Marino of the Amateur Astronomer's Union of Naples to say that their group has started to actively take lunar spectra of Aristarchus, using the Capodimonte observatory of the National Astrophysical Institute of Naples. Using a Celestron C11 telescope and a home-made spectroscopic equipment, they are achieving a spectroscopic scale of 0.08 nm per pixel. An observational run on 2011Jul 12 revealed that some of the lines had a "*higher spectral intensity*" than the same lines on three later nights. Also, there was a decrease in spectral intensity of some lines down the blue end of the spectra. I would rather not say any more about this until they have done a ratio of spectra on different nights and published their results. But if I hear any more news I shall pass this onto you.

I would like to thank Bob O'Conner for pointing out the following next two stories. Experimental and computer simulation research by Dutch scientists suggest that the Moon's interior is at least 30% molten between 1200 and 1350 km beneath and hence the surface has been volcanically dead for some time now, however it could become active again in the distant future due to the way the interior melt crystallizes and changes buoyancy with respect to surrounding rocks – see http://www.nature.com/ngeo/journal/v5/n3/full/ngeo1402.html for further information. Secondly, Dr Thomas Watters from the Smithsonian Institution has been studying NASA LROC images. He has already found that there were plenty of examples of lobate scarps that suggest that the Moon is shrinking. He has now found some examples of small graben which infer that the crust is also moving apart in places. As some of these intersect very recent craters, this would imply that some of the graben themselves are very geologically young. You can see a video about this discovery on: http://www.youtube.com/watch?v=1Ba-9ntruCs . Many of these small graben are in close proximity to known Moon quake sites. This is interesting because it means that at least some graben could well be forming now as you read this article! A paper by Alan Binder in Geophysical Research Letters back in 1980 discusses the release of Argon during shallow Moon quakes, so perhaps we have here a mechanism to kick up some dust at these sites and cause LTP? Alas it seems from the chart of recent graben that Tom Watters shows, very few of these correlate with LTP sites.

Routine Reports: As usual, space is rather limited to describe all of the supply of routine reports sent in, and the observations sent in were all of excellent quality, but here are just a few highlights from February 2012:

1) Cauchy: On 1969 Jul 29 UT 06:00-06:22 Pamplona, and two other observers from Brazil, using a 2″ refractor, found Cauchy to be very bright, clear and pulsating. A repeat illumination image by Norman Izett (New Zealand) taken on 2012 Feb 07 at 09:43 UT shows that the crater is bright, but cannot tell us if it was pulsating or not. For now I am leaving this LTP at a weight of 3.

2) Bessel: On 1877 Jun 17 Dennett thought that he could detect a minute point of light shining out of the dark crater. Jay Albert re-observed under the same illumination conditions but could not see the claimed spot of light. Therefore this LTP remains at an ALPO/BAA weight of 3.

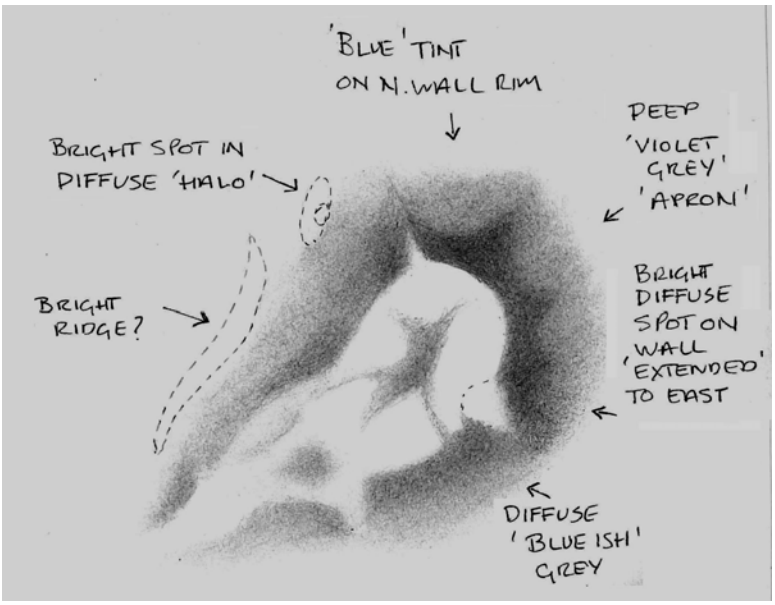


Figure 1. A modified sketch of Aristarchus by Nigel Longshaw from 2012 Feb 8th, confirming the diffuse appearance of the interior of the crater at this stage in the illumination. North is towards the top.

3) Aristarchus: On 2012 Feb 8th at 23:00 UT Nigel Longshaw sketched Aristarchus, in the hope of seeing what it looked like (according to my on-line predictions) back in 1983 October 22nd when Peter Foley was supposed to have seen a LTP there. Nigel's sketch indicates blue tint on the northern wall, a deep violet apron to the north and a diffuse bluish grey to the east. His sketch also depicts a bright extended spot on the eastern wall, extending beyond the crater. Here I have to apologize humbly, it seems that in my database I transposed the reports for 1983 Oct 22, and 23, by one day, and so Nigel's sketch (see figure 1) corresponds more closely with Geoff Amery's LTP of 1983 Oct 22nd UT23:10 when it was reported that Aristarchus was bright and difficult to see detail internally, and furthermore was so bright that no measurement could be made with the CED (Crater Extinction Device). I have now corrected the entry in the LTP database.

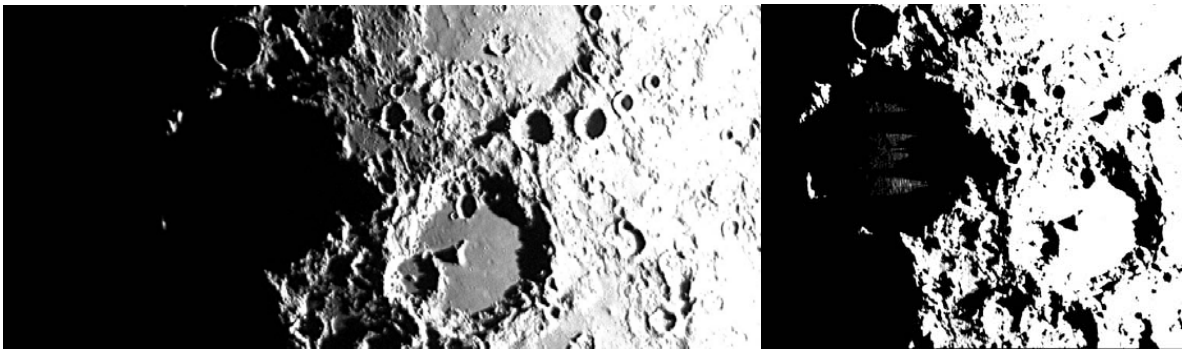


Figure 2. North is at the top. **(Left)** A completely shadow filled Ptolemeus in an image by Brendan Shaw from 2012Feb29 UT 20:21. **(Right)** An ALVIS simulation of what the floor should have looked like at the end of the 1970 Travnik LTP.

4) Ptolemeus: Back in 1970Apr 14 between 00:45 and 01:30 UT Brazilian astronomer Travnik, using a 4″ refractor, observed *A kind of glimmering mist lifted and wafted inside the shady hollow of the crater*″. On 2012 Feb 29 at UT 20:21 Brendan Shaw re-imaged the crater under very similar illumination conditions that matched to within 9 minutes the start of Travnik's LTP. Fig 2 (Left) shows what Brendan saw – it at least confirms that the floor was shadow filled, but shows no sign of any detail. I tried

modelling the appearance of the floor at the end of the Travnik LTP and as Fig 2 (Right) shows, we can see the raised floor breaking through the shadow and some characteristic shadow spires like one gets with Plato. In fact the Travnik LTP has some similarities to an article that I write with GLR's Raffaello Lena in the BAA Journal Vol; 114, p136-139 in 2004. However as we cannot completely explain the glimmering mist lifting and wafting effects (though these might be resolution and seeing related), I am lowering the weight of this observation to from 3 to a 2.

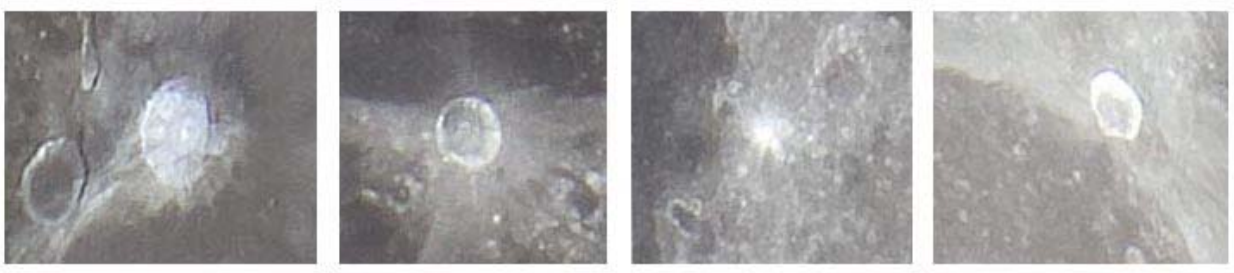


Figure 3. Extracts from Rolf Hempel's image mosaic from 2012 Feb 06 with north at the top. From left to right: Aristarchus, Menelaus, Censorinus and Proclus.

5) Aristarchus: When Sir Patrick Moore observed Aristarchus on 1983 Oct 20, at 23:40 he reported that Aristrachus was brighter than normal (using a CED), and more so than Censorinus, Menelaus, and Proclus in turn. On 2012 Feb 06 Rolf Hempel took a whole Moon image mosaic between 21:16 and 22:02UT under very similar illumination. In order of brightness here are the corresponding maximum digital number values: Aristarchus (253), Censorinus (255), Menelaus (253) and Proclus (255). However this does not tell the whole story as not all parts of each crater is at peak brightness. Figure 3 shows that Proclus and Censorinus appear "visually" to be the brightest, or rather have more bright pixels per unit area. So for now I will leave the weight of this observation at a 2 as it is possible that viewing angle (libration) may have some effect too.

LTP Reports: One LTP report was received: on Feb 28 at UT 19:45-20:00 Raffaello Braga (Italy, 100 mm refractor, seeing III, transparency very good)) when he examined Maurolycus and found that the central peak of the crater was bright in red light but disappeared in blue light. Interestingly this matched what Staedke of Berlin saw back in 1971 May 1st under similar illumination.

Suggested Features to observe in April: A list of repeat conditions, for when a feature will exhibit the same illumination, as was seen for a historical LTP observation, 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 very clear understanding of what the feature ought to have looked like at the time. Only this way can we really fully analyze past LTP reports.

If you would like to join the LTP telephone alert team, please let me know your phone No. and how late you wish to be contacted. If in the unlikely event you see a LTP, please give me a call on my cell phone: +44 (0)798 505 5681 and I will alert other observers. Note when telephoning from outside the UK you must not use the (0). When phoning from within the UK please do not use the +44! Twitter LTP alerts can be accessed on http://twitter.com/lunarnaut.

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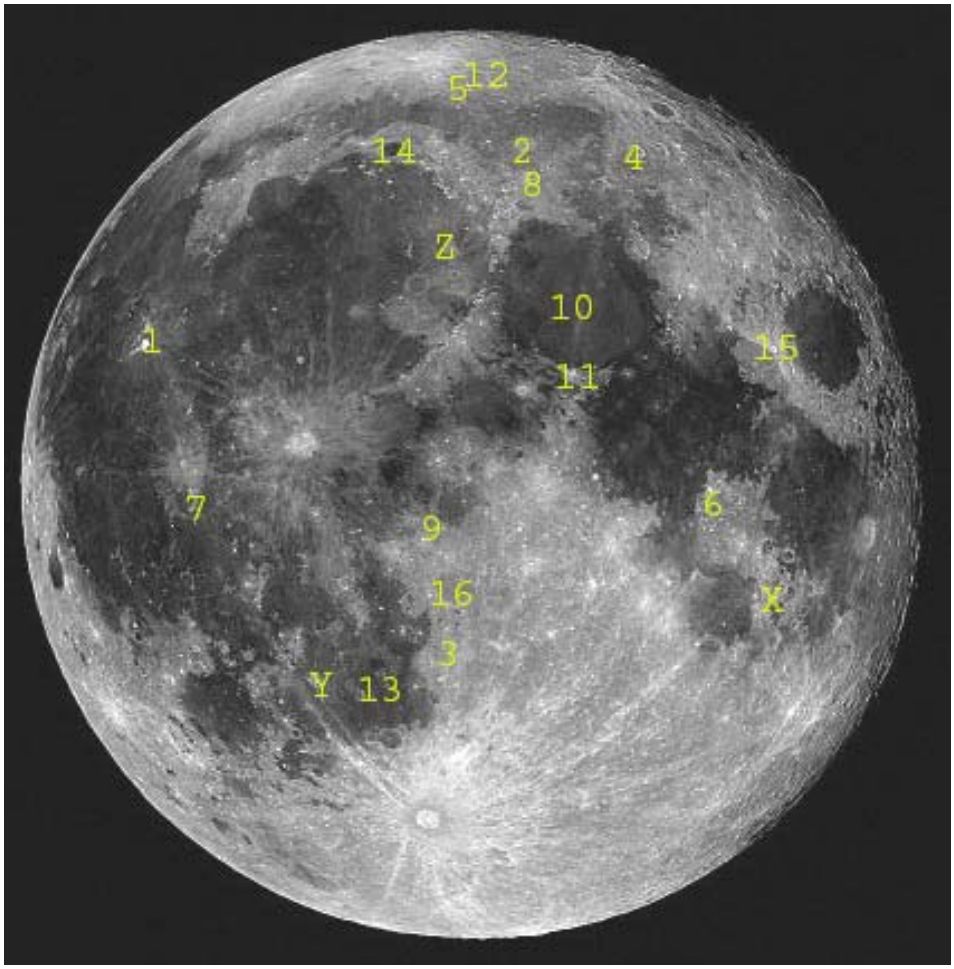
KEY TO IMAGES IN THIS ISSUE

1. **Aristarchus**
2. **Aristoteles**
3. **Arzachel**
4. **Atlas**
5. **Barrow**
6. **Censorinus**
7. **Encke**
8. **Eudoxus**
9. **Flammarion**
10. **Mare Serenitatis**
11. **Menelaus**
12. **Meton**
13. **Nicollet**
14. **Plato**
15. **Proclus**
16. **Ptolemaeus**



FOCUS ON targets

X = Pyrenees Mts. (May)
Y = Bullialdus (July)
Z = Aristillus (September)