

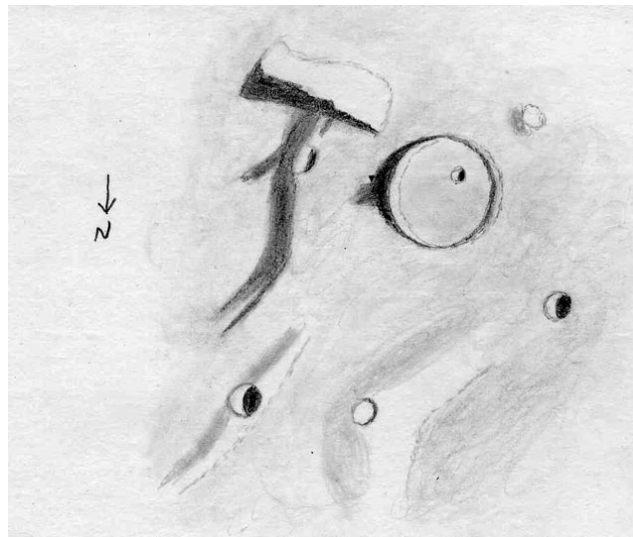


THE LUNAR OBSERVER

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 - JULY 2008



JANSEN

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

January 27, 2008 – 11:00 to 11:22 UT

15cm Newtonian - 170x - Seeing: 6-7/10

I observed this crater and vicinity on the morning of January 27, 2008 after the moon uncovered ZC 1759. Jansen is a fairly crisp, round crater in northern Mare Tranquillitatis. It has a smooth interior except for the pit Jansen Y southwest of center. The east rim of Jansen appears to be much higher than the west rim. The craters Jansen L and E are northeast and northwest of Jansen respectively. A shallow saucer about as large as these two craters lies between them. A substantial, elongated swelling is just southeast of Jansen, and a conspicuous wrinkle extends northward from it toward Jansen L. An oblong crater appears to be just north of this swelling near a fork in the wrinkle. Jansen L is within a short, modest wrinkle ridge, and a very low, broad wrinkle appears to contain the unnamed saucer. A bright patch lies southwest of Jansen alongside a grayish bit of shadowing that may or may not be connected with it. The Lunar Quadrant map shows a short rille between Jansen and Jansen L, but I was not able to detect it.

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 - JULY 2008 (UT)

July 01	14:00	Moon 7.7 N of Mercury
July 01	21:00	Moon at Perigee (359,512 km - 223,390 miles)
July 02	23:00	Moon 0.96 Degrees NNE of asteroid Ceres
July 03	02:19	New Moon (Start of Lunation 1058)
July 03	14:00	Moon 1.7 Degrees NNE of Venus
July 06	16:00	Moon 2.3 Degrees SSW of Mars
July 06	20:00	Moon 3.1 Degrees SSW of Saturn
July 10	04:34	First Quarter
July 14	04:00	Moon at Apogee (405,451 km - 251,936 miles)
July 17	14:00	Moon 2.6 Degrees SSE of Jupiter
July 18	07:59	Full Moon
July 20	13:00	Moon 0.80 Degrees NNW of Neptune
July 22	18:00	Moon 3.7 Degrees NNW of Uranus
July 25	18:42	Last Quarter
July 29	23:00	Moon at Perigee (363,886 km - 226,108 miles)
July 31	04:00	Moon 0.87 Degrees SSW of asteroid Ceres

CALL FOR OBSERVATIONS: **FOCUS ON: Aristoteles to Eudoxus**

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 **September 2008** edition will be the area from **Aristoteles to Eudoxus**. 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 these fascinating features to your observing list and send your favorites to:

Dembowski@zone-vx.com or dembowski@alpo-astronomy.org

Deadline for inclusion in the Aristoteles to Eudoxus article is August 20, 2008

FUTURE FOCUS ON ARTICLES:

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

Bullialdus to Kies
Albategnius

TLO Issue: Nov. 2008
TLO Issue: Jan. 2009

Deadline: October 20, 2008
Deadline: December 20, 2008

FOCUS ON: Aristarchus Plateau

By William M. Dembowski, FRAS

Coordinator: Lunar Topographical Studies



FIGURE 1

Location of Aristarchus Plateau

Digital image by Andy Miller

Conneaut, Ohio, USA

102mm Refractor – 17mm Plossl eyepiece

HP635 Camera, Afocal

INTRODUCTION:

In the northern reaches of Oceanus Procellarum, near the opening into Mare Imbrium, lies one of the true showcases of the Moon, the Aristarchus Plateau (Figure 1). The plateau is a roughly diamond shaped area (170km x 200km) with straight sides that rise 2km above the surrounding terrain. Also known as the Aristarchus Uplift, it is somewhat darker than its surroundings and the only large feature of its kind on the Moon (Figure 2).

FIGURE 2

General appearance of the Plateau

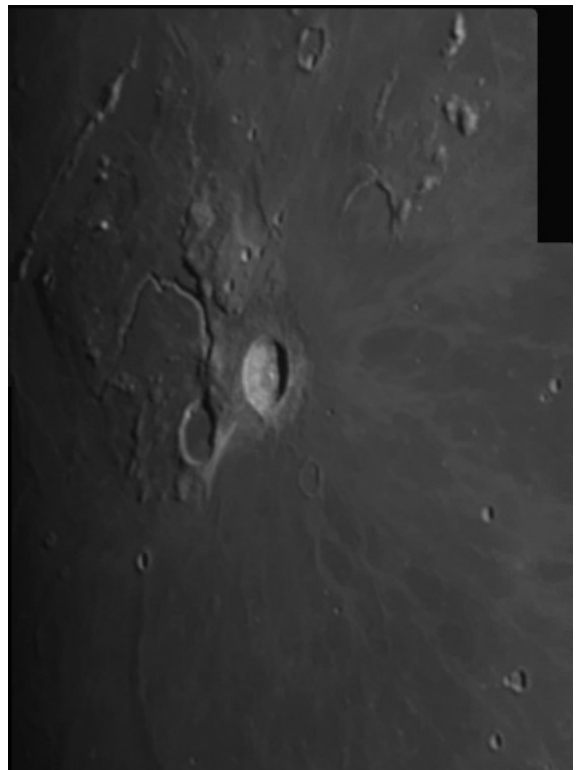
Digital image by Rik Hill

Tucson, Arizona, USA

March 31, 2007 – 04:18 UT

Celestron C14 SCT – Prime focus

SPC900NC Camera – Wratten 21 Filter



It should also be noted that this region is responsible for fully 1/3 of all reported LTP events. Whether this is strictly a measure of its activity, or if its reputation adds to increased observations and, therefore, more reported events is uncertain. It is, to be sure, a region that should be high on your observing list if you are in search of LTP phenomena.

ARISTARCHUS:

Aristarchus, the crater for which the plateau is named, is about 40 km (25 miles) in diameter with a floor that is a full 2km below its walls. Generally accepted as the brightest large crater on the lunar surface, Aristarchus is probably the youngest crater of its size on the nearside. When Aristarchus is not on the terminator, the crater and its associated ray system shine so brilliantly that they can dazzle the eye and this may be a contributing factor to the number of LTP reports. Even when the Moon is only a few days past New, and Aristarchus is illuminated strictly by Earthshine, it is easily seen. In fact, William Herschel mistook it for an active volcano under just such conditions.

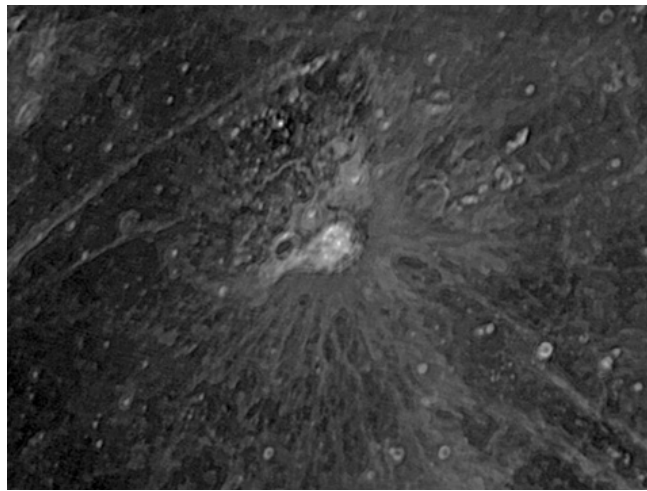


FIGURE 3 - Ray system of Aristarchus

Digital image by Bill Dembowski - Elton, Pennsylvania, USA

July 31, 2007 – 03:30 UT – Colong: 108.1

Seeing: 3/10 – Trans: 3/6

Celestron 8 inch SCT - Orion StarShoot II

The rays of Aristarchus are more extensive than is immediately apparent (125km to 150km long). (Figure 3) They have a braided appearance and spread mainly to the south and east where they interact with those of Kepler and Copernicus. Oddly, the rays from Aristarchus do not appear on the plateau itself. This asymmetry of the ray system may be an indication that the crater was formed by an impactor which struck at a rather low angle. Further evidence of such a strike might be inferred from its offset central mountain which is often overlooked because of the brilliance of the crater floor.

The floor and inner walls of Aristarchus exhibit a pattern of bands that have long been of great interest to lunar observers including those participating in the ALPO Banded Craters Program. Some early observers thought that the bands might be an optical illusion, somehow created by the brilliance of the crater. With the advent of lunar photography this proved not to be the case. The Aristarchus bands are now attributed to either glassy ejecta from the original impact or landslips that occurred at a somewhat later date. (Figure 4)



FIGURE 4 – Bands within Aristarchus

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

June 16, 2008 – 02:48 UT – Colong: 59.9

Seeing: 3/10 – Trans: 4/6 – Schuler IR72 Filter

Celestron C11 SCT at f/20 – Lumenera Skynyx 2-1M Camera

HERODOTUS & SCHRÖTER'S VALLEY:

The nearby companion of Aristarchus is the crater Herodotus which bears little resemblance to its neighbor (Figure 5). Slightly smaller in diameter (35 km) than Aristarchus, Herodotus is also shallower (1.3km deep), has a flooded floor, and no ray system. The lack of rays and its degraded walls indicate that Herodotus is an older crater than the bright and sharp walled Aristarchus. In smaller telescopes it appears that Herodotus is the source of Schröter's Valley when, in actuality, that honor goes to a third crater in the group known as the "Cobra's Head".



FIGURE 5 – Herodotus

Digital image by Rafael Benavides Palencia - Posadas, Cordoba, Spain

January 20, 2008 – Seeing 6/10

Celestron 11 inch SCT – 2x Barlow – IR Pass Filter – Luna QHY-5 Camera

Schröter's Valley is the largest sinuous rille on the Moon, running a winding course for about 160 km. The Valley has a width of about 10 km and a depth of 1km. It is easily seen in small telescopes. Looking very much like a dried river bed, it was thought by some early observers to be just that. The river that ran through it, however, was probably one of lava and not water.

CONCLUSION:

Whether you are searching for LTPs, or domes (there is one within the arc of Schroter's Valley) or you are a ray tracer, an observer of bands, or simply a general observer ... there is much to be seen on the Aristarchus Plateau. And be sure to view it under a number of different lighting conditions to see its many features to their fullest advantage.

REFERENCES:

Dembowski, William M., "The Aristarchus Plateau", Selenology (Vol.22 No.2 – Summer 2003)
North, Gerald, "Observing the Moon", Cambridge University Press (2000)
Rukl, Antonin, "Atlas of the Moon", Hamlyn (1990)
Wood, Charles, "The Modern Moon", Sky Publishing (2003)

OBSERVATION OF HERODOTUS

**Drawing and observing notes by
Peter Grego - St. Dennis, Cornwall, England**



On 31 May 1985, in good conditions using a 7-inch refractor, an apparent hill was seen on the floor of the crater Herodotus. This was unusual, since Herodotus has a flat floor! In a period of nearly two hours, from 20:00 UT onwards, the hill appeared to flatten and disappear, its sunlit face becoming dimmer, its shadow narrowing and fading. Alas, circumstances ruled out obtaining independent confirmation, but I have since learned that this temporary hill phenomenon has been observed in the past, and it has also apparently been observed under an evening illumination.

Aristarchus Plateau Under Different Lighting

Text and digital images by

Antonius J Schalken - Melbourne, Victoria, Australia

It always pays to revisit a site from time to time. The first two pictures show Aristarchus Plateau when lit from the East (respectively lunations of 12.4 days and 13.1 days after New Moon). As seen in countless photos the crater Aristarchus shines brightly, making it difficult to distinguish any features in its interior. To the north of Herodotus, meandering in a wide arch, we find the Schöter's valley.

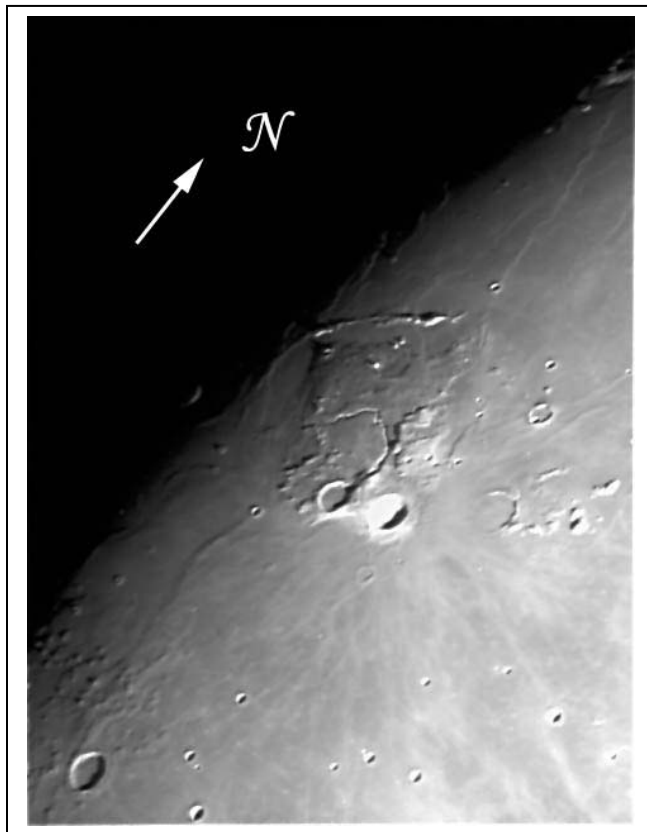


Figure 1: Aristarchus Plateau – Colongitude 57.2° Lunation 12.4 days (from New Moon).

Name and location of observer: Antonius J Schalken – ‘Luar’ Observatory, Melbourne, Victoria, Australia (37° 54.6’ S and 145° 4.7’ E)
Name of feature Aristarchus Plateau
Date and time (UT) of observation 06 August 2006 at 13:04 (UT)
Size and type of telescope used: Maksutov 6” f/10
Orientation of image: North (marked)
Seeing: 1 to 10 (1-Worst 10-Best) not recorded
Transparency: 1 to 6: not recorded
Medium employed (for photos and electronic images); digital image obtained with Philips ToUcam Pro II 740K
89 images stacked and processed
Image processing: Registax V3.0.19 and Adobe Photoshop 6

Bright matter extending from Aristarchus (Fig.2) in a westward direction skirts the crater Herodotus and beyond, Schiaparelli.

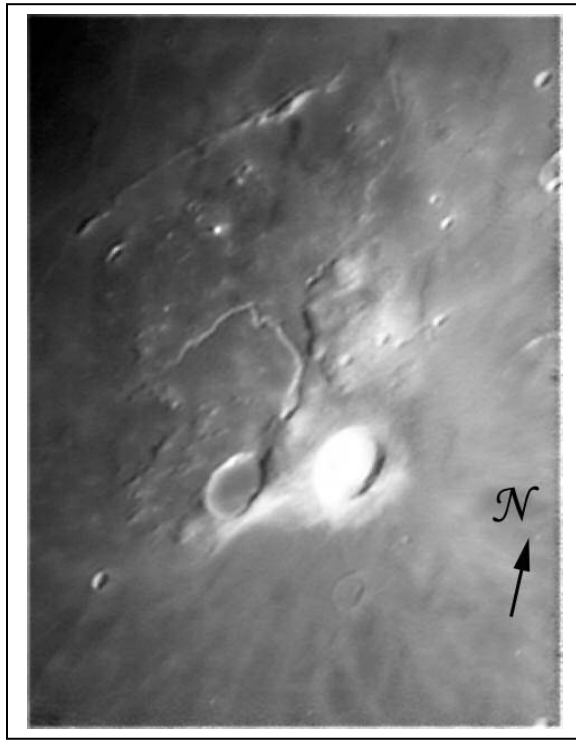


Figure 2: Craters Herodotus, Aristarchus and Schröter's valley (Colongitude 65.9° Lunation 13.1 days).

Name and location of observer: Antonius J Schalken – 'Luar' Observatory, Melbourne, Victoria, Australia (37° 54.6' S and 145° 4.7' E)
Name of feature Craters Herodotus and Aristarchus and Schöter rille
Date and time (UT) of observation 24 September 2007 at 14:38 (UT)
Size and type of telescope used: Maksutov 6" f/20
Orientation of image: North (marked)
Seeing: 1 to 10 (1-Worst 10-Best) not recorded
Transparency: 1 to 6: not recorded
Medium employed (for photos and electronic images); digital image obtained with Philips ToUcam Pro II 740K
67 images stacked and processed
Image processing: Registax V3.0.1.23 and Adobe Photoshop 6

Going back to my opening remark, the crater Aristarchus yields some of its internal details when lit from the West.

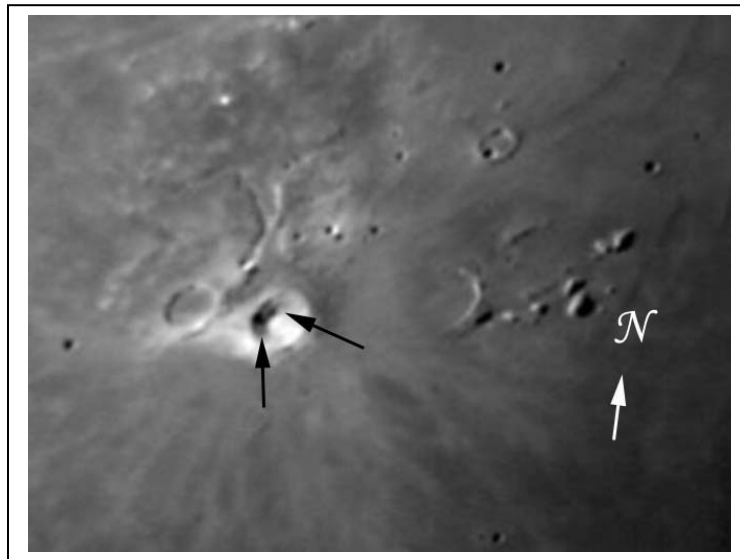


Figure3: Craters Aristarchus and dark ‘bands’ (Colongitude 203.9° Lunation 23.8 days).

At colongitudes in the range 180° and 205° (Table 1.), experimenting with filters and changing the gain setting in the web-cam capture program, one can see some dark structures on the inside of the western wall of Aristarchus. Given the popularity of this site with lunar observers, it is surprising how infrequently this feature is seen or recorded. Then again, it is a difficult feature for me to observe from my observatory because the Moon (at these lunations) only clears the trees in my back-yard late in the morning. The picture above was obtained at around 9:30 local time, four hours after sunrise. Other observers may have similar difficulties.

Date and time (UT)	Colongitude	Lunation	Appearance of dark bands
2005-04-03 22:57	205°	24.57	Very prominent
2005-05-01 22:37	186°	23.1	Prominent
2006-01-21 22:35	179°	21.8	Prominent (needed a filter to improve contrast)

Table 1.: Session dates and times of successful observations of ‘dark bands’.

The nature of these dark patches (referred to as ‘radial dark bands’ in Gerald North’s excellent book – North, 2007) remain unexplained. The image above (Fig.3) was re-sized by 200% using a Lanczos algorithm to enhance the visibility of the dark bands for the purpose of publication. The bands are readily visible on the original images.

Name and location of observer: Antonius J Schalken – ‘Luar’ Observatory, Melbourne, Victoria, Australia (37° 54.6’ S and 145° 4.7’ E)
Name of feature Craters Aristarchus and dark ‘bands’
Date and time (UT) of observation 23 January 2006 at 23:29 (UT)
Size and type of telescope used: Maksutov 150mm f/10
Orientation of image: North (marked)
Seeing: 1 to 10 (1-Worst 10-Best) not recorded
Transparency: 1 to 6: not recorded
Medium employed (for photos and electronic images); digital image obtained with Philips ToUcam Pro II 740K
67 images stacked and processed
Image processing: Registax V3.0.1.23 and Adobe Photoshop 6

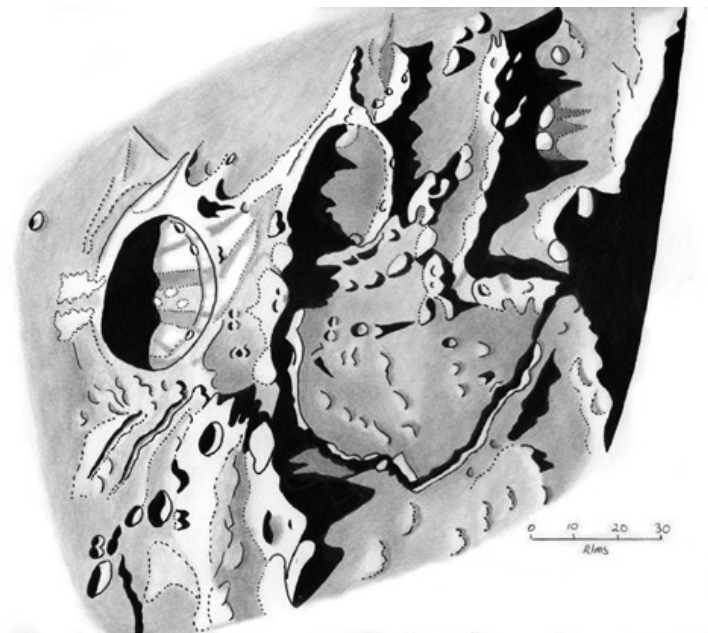
In conclusion, never assume you have seen the whole story and it is also, always, worthwhile to play around with the settings of your camera or web-cam and filters.

For those interested in seeing a great close-up of Aristarchus, I highly recommend the 3D video clip created by: NASA, ESA, G. Shirah and A. Kekesi (GSFC/SVS), and G. Bacon (STScI) and found at this URL <http://hubblesite.org/newscenter/archive/releases/2005/29/video/e/>

References:

North, G (2007) Observing the Moon – The modern astronomer’s guide:2nd edition.
Cambridge University Press, Cambridge, UK

ADDITIONAL OBSERVATIONS OF ARISTARCHUS PLATEAU

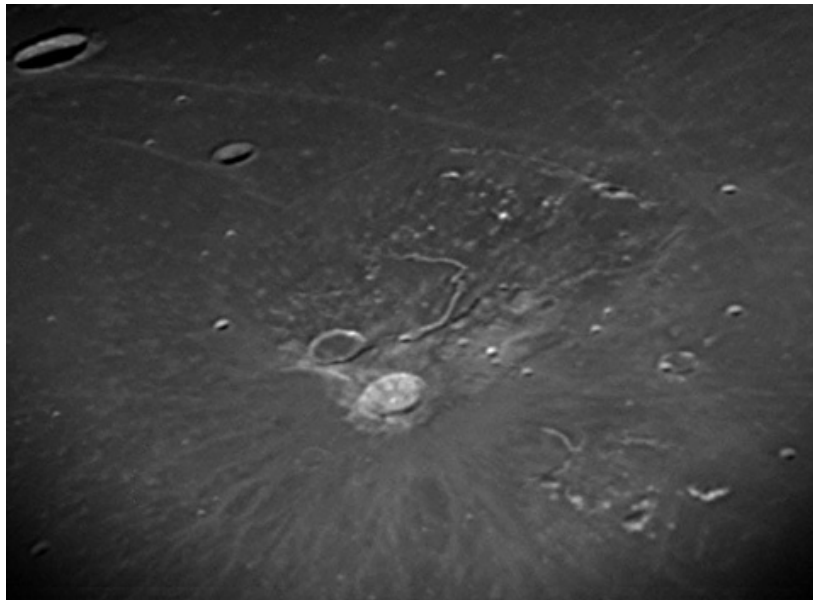


**Drawing by Philip Morgan – Tenbury Wells, Worcestershire, England
February 14, 1973 – 19:00 to 21:00 UT
153mm Grubb Parsons Refractor – 430x – Seeing: Excellent**

ADDITIONAL OBSERVATIONS OF ARISTARCHUS PLATEAU



**Digital image by Axel Tute – Baden-Wurttemberg, Germany
November 24, 2004 – 21:15 UT – Colong: 60.4
Seeing: 8/10 – Trans: 5/6
8 inch f/10 SCT – Toucam 740k Webcam**



**Digital image by John Sabia – Fleetville, Pennsylvania, USA
(Keystone College Thomas G. Cupillari Observatory)
April 19, 2008 – 02:10:42 to 02:11:42 UT – Colong: 71.26 - Seeing 7-8/10
241.3mm f/15 Alvan Clark Refractor – 2x TeleVue Barlow
15mm TeleVue Panoptic Eyepiece - CoolPix 995 Camera - Afocal**

LUNAR TOPOGRAPHICAL STUDIES

Coordinator - William M. Dembowski, FRAS

dembowski@zone-vx.com

OBSERVATIONS RECEIVED

WAYNE BAILEY - SEWELL, NEW JERSEY, USA

Digital images of Aristarchus Plateau (13)

Banded Crater Report Forms with digital images of Burg (5), Birt (2)

MAURICE COLLINS - PALMERSTON NORTH, NEW ZEALAND

Digital images of 12-day Moon, Mare Nectaris, Mare Frigoris, Tycho & Southern Highlands, Kepler & Oceanus Procellarum, Aristarchus & Oceanus Procellarm

HOWARD ESKILDSEN - OCALA, FLORIDA, USA

Digital images of Mare Orientale region, Oceanus Procellarum

PETER GREGO - ST. DENNIS, CORNWALL, ENGLAND

PDA drawings of Mons Hadley, Aliacensis, Deslisle & Diophantus (2)

KIM HAY - YARKER, ONTARIO, CANADA

Digital images of 27-day Moon (2)

PAOLO LAZZAROTTI - MASSA, ITALY

Digital images of Mare Serenitatis, Mare Humorum

MICHEL LEGRAND - LA COUYERE, FRANCE

Digital images of Condorcet, Copernicus, Fra Mauro & Guericke, Messier, Tycho, Rheita Valley, Ptolemaeus-Alphonsus-Arzachel, Plato

ANDREW MARTIN - ROCKVILLE, MARYLAND, USA

Written observations of rays systems of Proclus (4), Langrenus (4), Petavius & Petavius B (4), Messier (2)

PHIL MORGAN - WORCESTERSHIRE, ENGLAND

Drawings of bands within Aristarchus (8)

RAFAEL BENAVIDES PALENCIA - POSADAS, CORDOBA, SPAIN

Digital images of Aristarchus Plateau (2)

ANTONIUS SCHALKEN - MELBOURNE, AUSTRALIA

Digital images of Aristarchus Plateau, Aristarchus & Herodotus, Aristarchus

AXEL TUTE - BADEN-WURTTENBERG, GERMANY

Digital image of Aristarchus Plateau

RECENT TOPOGRAPHICAL OBSERVATIONS



MARE ORIENTALE

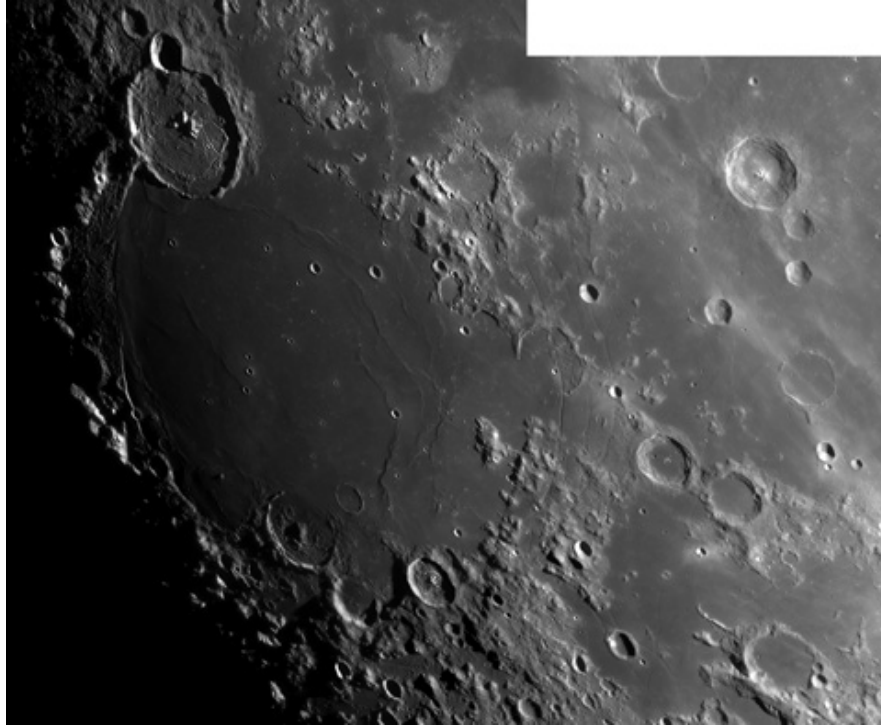
**Digital image by Howard Eskildsen – Ocala, Florida, USA
May 28, 2008 – 6 inch Meade Refractor – Orion StarShoot II**



27-DAY MOON

**Digital image by Kim Hay – Yarker, Ontario, Canada
June 1, 2008 – 03:59:53 UT
8 inch Dobsonian Reflector – 26mm Super Plossl Eyepiece
Canon PowerShot A540 - 1/8 second - Afocal**

RECENT TOPOGRAPHICAL OBSERVATIONS



MARE HUMORUM

Digital mosaic by Paolo Lazzarotti – Massa, Italy

February 17, 2008 – 21:06/21:09/21:14/21:17 UT

Seeing: 4-6/10 – Trans: 3/5 – Edmund Optics R Filter

Gladius CF-315 Lazzarotti Opt. Scope – LVI-1392 Experimental Camera



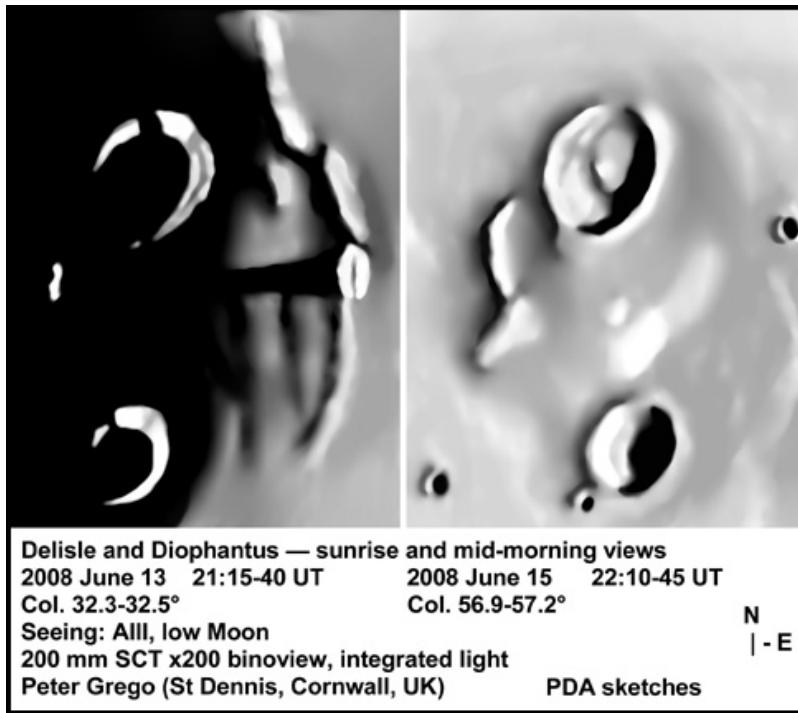
FRA MAURO & GUERICKE

Digital image by Michel LeGrand – La Couyere, France

April 14, 2008 – 20:34 UT – Colong: 19.6 – Seeing: Medium

C11 SAR – f=2800mm – Philips Toucam

RECENT TOPOGRAPHICAL OBSERVATIONS



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 - William M. Dembowski, FRAS

Bright Lunar Rays Project Website:

<http://www.zone-vx.com/alpo-rays.html>

OBSERVATIONS OF PETAVIUS-B (57.1°E, 19.9°S)

By Andrew Martin – Rockville, Maryland, USA

(77° 8' 22" W, 39°4' 50" N, elevation 128 meters)

Date: June 9th, 2008

Time: 22:18:50 UT to 23:38:36 UT

Ephemeris for 22:18:50 UT

Distance: 380196 km

Colongitude: 344.8°

Lunation: 6.14 days

Phase: 97.8°

Illumination 43.2%

Solar Inclination: 1.4°

Telescope used: 150mm Celestron C6-S SCT (XLT) f/10

Lens used: GTO Plossl 32mm and GTO x2 Barlow (magnification 93.75x). I was unable to really use my 20mm Celestron Plossl due to the fact images were too faint.

Seeing: Unable to determine with star method due to sun being up. No estimate provided by Clear Sky Clock, but based on observations of moon directly I would say 3-6 with average being about 4-5.

Transparency: 2-3 (basically poor).

Weather: Clear with a fine thin haze in the sky. Surface temps were about 100°F.

Observation: Crater can be made out at the southern tip of Mare Fecunditatis. There appears to be a small craterlet to its immediate south. Petavis B is similar to Proclus where part of its rays system is missing. This "V" notch is in the north vs. Proclus' western. The notch is about ¼ of the ray system. The ray system appears to emanate from the crater wall with a small amount of material could be seen curving along the northern section where the "V" notch is located. The ray system appears to be confined to close proximity of the crater and the southern section of the Mare Fecunditatis. The rays had a mixed white/gray color to them and appeared similar to that of Proclus where individual rays could not be made out but more of a halo effect. Overall the ray system had the appearance of butterfly wings with the western wing being much smaller (about half the size) than the eastern wing, and both wings came together at the south. At the tip of the "V" a longer ray could be seen on the western section of the "V" tip.

Date: June 11th, 2008

Time: 23:11:51 UT to 00:40:06 UT

Ephemeris for 23:11:51 UT

Distance: 391182 km

Colongitude: 9.5°

Lunation: 8.16 days

Phase: 74.2°

Illumination 63.6%

Solar Inclination: 1.3°

Telescope used: 150mm Celestron C6-S SCT (XLT) f/10

Lens used: Celestron Plossl 20mm and GTO x2 Barlow (magnification 150x).

Seeing: Unable to determine with star method due to sun being up. Clear Sky Chart estimated 3 out of 5, but based on observations of moon directly I would say 4-5 out of 10.

Transparency: Started at 2 and ended up at 4 out of 6.

Weather: Started as partly cloudy, and then went to clear with a fine thin haze in the sky. Surface temps were about 82°F.

Observation: Crater and ray system appears less pronounced than on June 9th. Fainter ray structures can be seen on Mare Fecunditatis to the NW of crater. Rays appear to emanate and distribute in the same pattern as June 9th. The only big difference is a very small ray can be seen coming from the middle of the “V” notch. It is about 8km long vs. 80km length of the eastern “V” leg. There are also other unassociated rays present in the same vicinity as the western section. These unassociated rays are running in a general north to south direction with one running more towards the west and a second one which appears to cross the western “V” section in a more easterly direction. A bright craterlet can be seen on the mare in the western “V” tip. There is also a dark line running from the crater rim towards Petavis in a SSE direction. Overall the ray system appears to have two kinds of rays. One which is whiter-gray and probably made of heavier material which is closer to the crater, and one which is much lighter and no doubt finer material located on the mare to the west after the western “V” section. The butterfly effect seems to be more muted.

Date: June 12th, 2008

Time: 00:23:05 UT to 01:04:19 UT

Ephemeris for 00:23:05 UT

Distance: 400595 km

Colongitude: 34.3°

Lunation: 10.21 days

Phase: 51.5°

Illumination 81.2%

Solar Inclination: 1.3°

Telescope used: 150mm Celestron C6-S SCT (XLT) f/10

Lens used: Celestron GTO Plossl 32mm and GTO x2 Barlow (magnification 93.75x). I was unable to really use my 20mm Celestron Plossl due to the fact images were too faint.

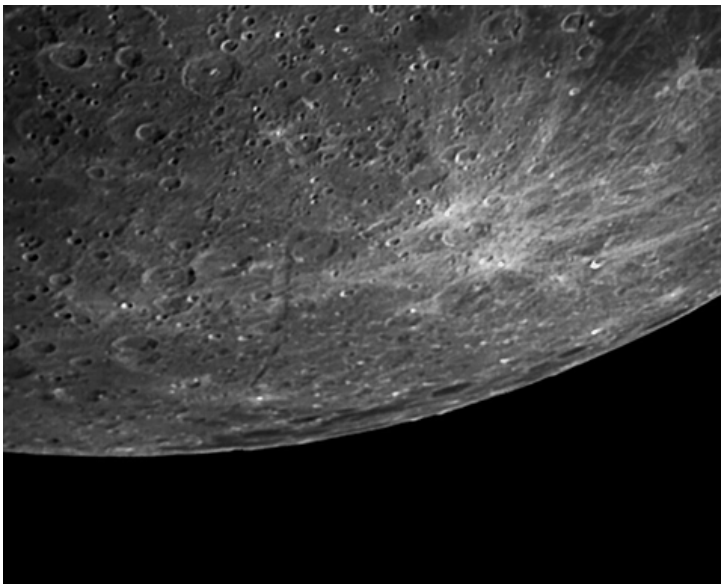
Seeing: Unable to determine with star method due to sun being up. Clear Sky Chart estimated 3 out of 5, but based on observations of moon directly I would say 4-5 out of 10.

Transparency: Started at 2 and ended up at 4 out of 6.

Weather: Started as partly cloudy, and then went to clear with a fine thin haze in the sky. Surface temps were about 82°F.

Observation: Petavis B is becoming less pronounced as a crater and ray system. Other rays coming up from the Stevinus region are more pronounced and cross the ray system of Petavis B. The eastern section of the ray system appears to be blending in with the surrounding terra. The western section continues to be divided into two ray components. The rays closer to the crater continue to fade like that of the eastern section, but the rays on the mare itself have become generally more pronounced. Distribution and emanation continues to be about the same as previous observations with the fact that the butterfly effect is no longer.

RECENT RAY OBSERVATIONS



SOUTHEASTERN QUADRANT

**Digital image (cropped)
by Bill Dembowski
Elton, Pennsylvania, USA
June 12, 2008 – 02:59 UT
Seeing: 3/10 – Trans: 3/6
Celestron 8 inch f/10 SCT
Orion StarShoot II**

TYCHO AND EAST

**Digital image by Maurice Collins
Palmerston North, New Zealand
May 21, 2008 – 11:16 UT
Meade ETX90 – Meade LPI**




BANDED CRATERS PROGRAM

Coordinator - William M. Dembowski, FRAS

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

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


Crater Observed: Birt	Observing Station: Sewell, NJ	Comments: Indistinct bands on west wall.
Observer: Wayne Bailey		
Mailing Address: 17 Autumn Lane, Sewell, NJ 08080		Banded craters Nicollet & Thebit A are also in this image.
Telescope: Celestron SCT 28 cm	f/20	
Imaging: Skynyx 2-1M	Filters: Schuler IR72	
Seeing: 4/10	Transparency: 5/6	
Date (UT): 2008/06/14	Time (UT): 02:23	
Colongitude: 35.3	Latitude: +1.4	
Position of crater: Selen. Long. 08.5° West	Selen. Lat. 22.4° 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 - Banded Craters Observing Form

Crater Observed: Menelaus	Observing Station: Elton Moonshine Observatory
Observer: William M. Dembowski	
Mailing Address: 219 Old Bedford Pike, Windber, PA 15963	
Telescope: Celestron SCT 20 cm	f/10
Imaging: Orion StarShoot II	Filters: 2x Barlow
Seeing: 3/10	Transparency: 3/6
Date (UT): 2007/06/12	Time (UT): 02:34
Colongitude: 11.2	

Image: (North up) (East right)



LUNAR TRANSIENT PHENOMENA

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

LTP NEWSLETTER - JULY 2008

Dr. Anthony Cook - Coordinator

Observations for May 2008 were received from the following observers: Jay Albert (FL, USA), Clive Brook (Plymouth, UK), Maurice Collins (New Zealand), myself (Aberystwyth and Newtown, UK), and Marie Cook (Mundesley, UK).

I have to report that the reorganization of the directory structure of my digitized LTP archive is still on-going. This is turning out to be a much greater task than I had expected, but I can now see the light at the end of the tunnel for finishing the specialized database software soon. The Radon-Argon-Hydrogen lunar emission line experiment is continuing except that I now have a backlog of video that I need to examine to catch up before the July session starts. This experiment is for small area imaging at moderate resolution. Our technicians at Aberystwyth University have now fitted a tone generator so that I can more clearly identify which filter is passing across the field of view. One of the robotic telescopes at Aberystwyth is also being used to take time lapse imagery of the lunar surface in one of three 10nm wide wavebands 855nm (close to and overlapping Radon), 656nm (Hydrogen), and 589nm (Sodium – might be expected from meteoroid impacts) but over a much larger area, albeit lower resolution, than the electronic Moon blink device.

Other news, Clive Brook has purchased a new refractor and has been sending me some test digital images of the Moon. Maurice Collins has ordered up a larger scope, and Jay Albert and Marie Cook continue to send in detailed observations that match the same illumination as past LTP reports from which we may judge what the normal appearance should be.

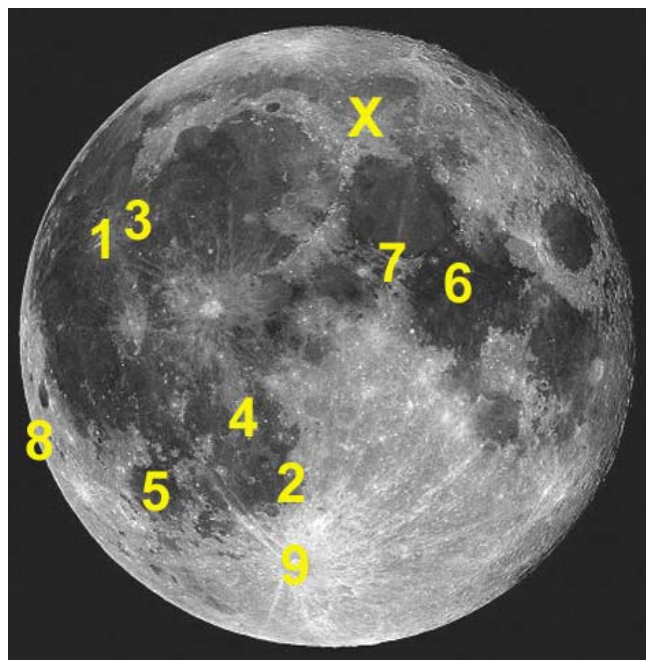
Predictions, including the more numerous illumination only events can be found on the following web site: <http://users.aber.ac.uk/atc/LTP/LTP.htm> . For members who do not have access to the internet, please drop me a line and I will post predictions to you. If you would like to join the LTP telephone 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, Institute of Mathematical and Physical Sciences, University of Wales Aberystwyth, Penglais, Aberystwyth, Ceredigion, SY23 3BZ, WALES, UNITED KINGDOM. Email: atc@aber.ac.uk

KEY TO IMAGES IN THIS ISSUE

1. Aristarchus Plateau
2. Birt
3. Delisle
4. Fra Mauro
5. Humorum, Mare
6. Jansen
7. Menelaus
8. Orientale, Mare
9. Tycho

X = Aristoteles & Eudoxus
(Next *FOCUS ON* target)



A.L.P.O. LUNAR COORDINATORS

Dr. Anthony Cook – Coordinator, Transient Lunar Phenomena atc@aber.ac.uk

Brian Cudnik – Coordinator, Lunar Meteoritic Impact Search cudnik@sbcglobal.net

David O. Darling – Asst. Coordinator, Transient Lunar Phenomena DOD121252@aol.com

William M. Dembowski – Coordinator, Lunar Topographical Studies & Selected Areas Program
Dembowski@zone-vx.com

Marvin W. Huddleston – Coordinator, Lunar Dome Survey kc5lei@comcast.net
