

## **BAA/ALPO TRANSIENT LUNAR PHENOMENA SECTION**

**2003 May**

Observations have been received from myself, Clive Brook, Marie Cook, Robin Gray, Raffaello Lena (GLR), Gerald North, and Brendan Shaw. Reports received by Robin Gray included a large batch of very fine quality drawings that he made between 2002 Sep 9<sup>th</sup> and Nov 24<sup>th</sup> - these all had annotated diagrams with visual intensity (Elger scale) estimates. This is an excellent way to compare lunar features over time! The total observing time by our observers for March was 15 hours, which is great news, but this leads to problems of reporting these in the limited space in the BAA Lunar Section Circular. So I will try keeping observers up to date with observations received for the current month on a link within the web site at the foot of this page. However below is a selection of some observations received for March:

2003 Mar 10 UTC 22:10 Marie Cook observed the terminator on Ptolemaeus, but saw no sign of crater Ptolemaeus A on its shadowed floor. This was in connection with checking up on the normal appearance for a 1952 Oct 26 UTC 00:23 TLP reported by Bartlett in which it is stated "*A not seen tho searched for. Observer suprised since a much smaller crater in Plato could easily be seen. A was seen next nite easily. Not obs. Since. tho not regularly obs.*" This was given a relatively high weight of 4 in the 1978 NASA catalog. However clearly something is wrong with the 1952 observation because Ptolemaeus A should not normally be visible at this stage of illumination and Bartlett implies that it should be visible? Possible explanations could be: a) something is wrong with the date and/or UTC, b) back in 1952 Ptolemaeus A might have meant something different to Bartlett to what we use now? Possibility (a) seems likely as it is easy to make a mistake in the day when one is in a different time zone, and Bartlett refers to seeing a craterlet in Plato, which was also not illuminated on 1952 Oct 26. Incidentally although not looking for Ptolemaeus A, Raffaello Lena, working for GLR, reports that he saw Bartlett's oval on the floor of Ptolemaeus forming at 22:17 UTC. The March ALPO/BAA article explains why Bartlett's oval is a normal appearance.

2003 Mar 11 UTC 20:09-20:48 Clive Brook, examined Sulpicius Gallus to check out the normal appearance for this crater for a TLP from 1867-Jun-10 UTC 22:00(?) where Dawes had reported: "*3 distinct roundish black spots. Absent on 13<sup>th</sup>.*" Clive did not see these spots inside this half shadow filled crater.

2003 Mar 11 UTC 19:57-20:48 Clive Brook checked out the normal appearance of Eratosthenes for a 1976-Aug-04 UTC 02:07 TLP where Bartlett reported seeing "*faint spot of light, 4 bright seen in shadow in pos. of c.p. which is normally invisible. At base of inner NW wall a faint bluish radiance (gas?) was observed*". Well Clive saw no colourations but suspects that he may have seen detail within the shadow from scattered light off the illuminated crater rim?: 19:57 UTC full of shadow, rim illuminated. Suspicion of point of light at central mountain. 20:09 UTC interior shows dim illumination, although mountains not lit up yet. 20:15 UTC ghostly view of mountain in shadow. 20:22 UTC dim light from central peak. Smudgy faint features in rest of shadow. 20:38 UTC central peak clearly visible with dim area on shadowed floor. 20:42 UTC central mountain dimly visible. 20:48 UTC patchy areas of dim illumination could just be made out on shadowed floor. Has anybody else ever seen detail in shadow - p100-101 of Webb's Celestial Objects for the Common Telescope suggests that it might be possible in other craters (thanks to Brendan Shaw for that information)?

2003 Mar 11 UTC 22:15 Marie Cook investigated the normal appearance for Plato to compare with Schroter's 1789-Jul-30 UTC 21:00(?) observation where he reported "soon after sunrise saw a kind of fermentation on the floor which clearly resembled a kind of twilight (due to some aberration unknown to observer?)". Marie found the west wall to be illuminated and the floor in semi-shadow with the eastern half with black shadow and 3 spires of half dark grey shade. She thinks that the twilight feature might be the contrast effect between the two shades on the floor. Earlier that evening Clive Brook noted: 19:57 floor fully shadowed, 20:15 slight brightening of shadow on floor, 20:22 dim light to south and west of shadowed floor, 20:38 dim light stretching across shadowed crater floor, 20:42 V-shaped dimly lit area on floor pointing East, 20:48 N and S areas of shadowed floor showing dimly lit areas with black band running E-W.

2003 Mar 12 UTC ~00:00 I managed to video the normal appearance of the Pallas area of the Moon close to where Dr Leon Stuart may have photographed an impact flash in 1953 Nov 15. If you wish to compare the original flash photograph with the normal appearance, please see: <http://marian.cs.nott.ac.uk/~acc/Lunar/combined.jpg>

2003 Mar 13 UTC 22:05-22:20 Marie Cook examined the normal appearance for Daniell in respect to a TLP report by Marcus Price in 1979 Jun 5 UTC 20:15-21:10 concerning an obscuration of the SE rim. Marie found the crater to be sharp and no clear sign of obstruction. However later from 23:00 UTC onwards Brendan Shaw found the SE part of the wall was certainly more "fuzzy" than the rest of the rim, but suspected that this may just be because it is more degraded? He notes that with the

Sun 49 deg above the local lunar horizon, it was hard to tell “what was what” but the SE rim was definitely different. When he finished observing at 00:30 the SE wall remained unchanged.

The following repeat illumination and libration events occur for May. Please note the region that is relevant to you and go out and observe:

Event: Eudoxus (Trouvelot, 1877 Feb 20) can be seen on/from (UTC): 2003 May 09 Atlanta, DC, Harrisburg, New York, Pittsburgh (01:39-05:47); Houston, Las Cruces, Madison (02:00-06:33); LA, Phoenix, Winnemucca (03:00-06:33); Orlando (01:39-05:54); Puerto Rico (01:39-03:59); UK (01:39-01:42) – *look for a thin line of light W. to E. across crater.*

Event: Plato (Kelsey, 1967 Apr 18) can be seen on/from (UTC): 2003 May 09 Germany, Italy (19:00-20:49); UK (20:00-20:49) – *check for visibility of, and colour on streaks/gaps between shadows on the floor.*

Event: Plato (Markov, 1925 Jun 29) can be seen on/from (UTC): 2003 May 09 Germany, Italy (19:57-23:28); (20:00-23:28) – *check for light bands/(gaps) in shadow.*

Event: Alphonsus (Wise, 1968 Apr 06) can be seen from (UTC): 2003 May 10 Atlanta, DC, Harrisburg, Pittsburgh (01:00-05:04); Houston, Las Cruces, Madison (02:00-05:04); Houston, Phoenix, Winnemucca (03:00-05:04); New York (00:31-05:04); Orlando (01:00-04:45); Puerto Rico (00:31-01:57); Germany (00:31-00:53); UK (00:31-01:55) – *check for glow inside W(?) wall.*

Event: Plato (Wise, 1968 Apr 06) can be seen from (UTC): 2003 May 10 Atlanta, DC, Harrisburg, Pittsburgh (01:00-05:04); Houston, Las Cruces, Madison (02:00-05:04); Houston, Phoenix, Winnemucca (03:00-05:04); New York (00:31-05:04); Orlando (01:00-04:45); Puerto Rico (00:31-01:57); Germany (00:31-00:53); UK (00:31-01:55) – *are dark patches in Plato prominent?*

Event: Straight Wall (Wise, 1968 Apr 06) can be seen from (UTC): 2003 May 10 Atlanta, DC, Harrisburg, Pittsburgh (01:00-05:04); Houston, Las Cruces, Madison (02:00-05:04); Houston, Phoenix, Winnemucca (03:00-05:04); New York (00:31-05:04); Orlando (01:00-04:45); Puerto Rico (00:31-01:57); Germany (00:31-00:53); UK (00:31-01:55) – *is there shadow from N end of Str. wall going towards Birt?*

Event: Tycho (Barker, 1931 Mar 27) can be seen on/from (UTC): 2003 May 10 Atlanta, DC, Harrisburg, New York, Orlando, Pittsburgh (01:12-05:07); Houston, Las Cruces, Madison (02:00-05:07); LA, Phoenix, Winnemucca (03:00-05:07); Puerto Rico (01:12-04:59); UK (01:12-01:55) – *original report was of: “shadow anomaly – curious gray on central peak, the interior was in shadow”*

Event: Proclus (Farrant, 1967 Apr 18) can be seen on/from (UTC): 2003 May 10 Madison (07:33-07:36); Winnemucca (07:33-08:59) – *is the crater darker than normal and how visible is the bright rim?*

Event: Copernicus (Cook, 1979 Aug 02) can be seen on/from (UTC): 2003 May 10/11 Atlanta, DC, Harrisburg, Orlando, Pittsburgh (01:00-03:21); Houston, Madison (02:00-03:21); Las Cruces (02:20-03:21); LA (03:09-03:21); New York (00:00-03:21); Phoenix (03:00-03:21); Puerto Rico (23:59-03:21); Winnemucca (03:03-03:21); Germany, Italy (23:55-00:59); UK (23:55-01:59)

Event: Plato (Barker, 1937 Dec 12) can be seen on/from (UTC): 2003 May 11 Atlanta (06:07-06:59); DC, Harrisburg, Pittsburgh (05:46-06:59); Houston (07:12-07:59); LA (08:04-08:43); Las Cruces (07:34-08:43); Madison (05:46-07:58); New York (05:46-06:51); Phoenix, Winnemucca (07:46-08:43) – *check for colour streak on E(?) wall and check for fine surface/shadow details + appearance over time.*

Event: Whole Moon (Dunlap, 1967 Apr 21) can be seen on/from (UTC): 2003 May 12/13 Atlanta, DC, Harrisburg, New York, Pittsburgh (01:00-02:15); Houston, Madison (02:00-02:15); Las Cruces (02:12-02:15); Puerto Rico (23:52-02:15); Germany (19:00-22:59); Italy (19:00-01:53); UK (22:20-02:15) – *image whole Moon in UV or violet and compare to white light or other wavebands.*

Event: Whole Moon (Dunlap, 1967 Apr 22) can be seen on/from (UTC): 2003 May 13 Germany Italy (19:00-19:14) - *image whole Moon in UV or violet and compare to white light or other wavebands.*

Event: Herodotus (Bartlett, 1956 Nov 15) can be seen on/from (UTC): 2003 May 13 Atlanta (06:57-08:42); DC, Harrisburg, Orlando, Pittsburgh (06:57-07:59); Houston (06:57-08:59); LA (06:57-10:55); Las Cruces, Phoenix (06:57-09:59); Madison (06:57-08:48); New York (06:57-07:45); Puerto Rico (06:57-06:59); Winnemucca (06:57-10:50) – *check for a pseudo peak?*

Event: Copernicus (Brook, 1996 Sep 06) can be seen on/from (UTC): 2003 May 24 Atlanta, Madison (08:00-09:37); DC, Harrisburg, New York (07:06-08:59); Houston (09:00-09:37), Pittsburgh, Puerto Rico (08:00-08:59) – *check visibility of central peak.*

Further 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 TLP telephone alert team, please let me know your phone No. and how late you wish to be contacted. If in the unlikely event you see a TLP, please give me a call on my cell phone: +44 (0)798 505 5681 and I will alert other observers. Note when telephoning from outside the UK you must not use the (0). When phoning from within the UK please do not use the +44!

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