

BAA/ALPO LTP NEWSLETTER – 2003 Apr - Tony Cook 2003

Observations have been received for February from UK observers: myself, Clive Brook, Marie Cook, Gerald North, Brendan Shaw; Italian observer: Raffaello Lena; and US observer: Robin Gray. Due to pressure of work, I have not had a chance to total observing time for February yet. Also space limits a full description about what everybody has been actively observing.

Several interesting observations spring to mind for February. This started off with some joint Earthshine observing for sporadic impact flashes on Feb 5th carried out by myself and Brendan Shaw in the UK, and in Italy by GLR members. A wealth of visible detail in Earthshine was commented upon, but the only flashes any of us saw were by my CCD video camera alone - so we knew that these were not lunar in origin, but were in fact just cosmic rays. Another interesting observation, by the same trio of observers, concerned the shadowed floor of Archimedes on Feb 9th when the illumination conditions matched (to +/-0.5 deg) the illumination during two past TLP events: Delano (New Bedford?, MA, USA), 1967 Jan 18/19 (actually repeat libration too) "Saw an obscuration or unusual appearance across floor" and Hill (UK), 1966 Mar 29 UTC 21:00 "Brightening of E-W bands across floor". On Feb 9th 2003 Brendan Shaw reported: 19:10-20:49 UTC "Approximately half of Archimedes was otherwise illuminated and half was in shadow - nice mountain spire shadows running across the centre of the crater, giving a "New York" skyline". Raffaello Lena sketched a drawing and this confirmed the shadow outline and other detail - I recorded this also with a CCD camera. Basically none of us regarded the shadow spires or darkness of the shadow to be unusual. So the only explanation I can think of at the moment was that perhaps under seeing conditions experienced by the 1960's observers, the shadow spires merged with some equally thin sunlit gaps in between to make for an unusual appearance? Or perhaps at the very least the shadow spires looked like E-W bands and these naturally brightened over time as the shadows shortened? So the shadow spires might offer a normal explanation for these two past TLP events, but I need to check the original observations in more detail to be sure.

Readers may have heard in the media about a paper by Buratti and Johnson (published in *Icarus*) where the authors used the published coordinates of the 1953 Nov 15 Stuart Flash to identify a "candidate" ~1 km diameter crater with the correct colour characteristics for a fresh impact. The authors did a good job at attempting to identify this "candidate" crater with the little information they had, however, they did not have access to a high quality copy of the original Stuart photograph, nor access to the range of past professional photographs that amateur astronomers now know about. Subsequent measuring of the 1953 photograph by amateur astronomers from ALPO and the Sky and Telescope revealed the true position of the Stuart flash to be ~30 km away from the candidate Buratti and Johnson crater. Theory and observation tells us that impact flashes do not normally last several seconds, as Stuart saw and photographed, so the mystery of the 1953 flash still remains an enigma!

The following repeat illumination and libration events occur for April. Please note the region that is relevant to you and go out and observe – I especially recommend checking out Aristarchus on Apr 15:

Event: Barker's Quadrangle (Moore, 1949 Mar 03) can be seen on/from (UTC): 2003 Apr 05 Germany (18:00-20:59); Italy (18:00-20:46); UK (19:00-21:34) – *[check for haziness and visibility of quadrangle craterlets]*

Event: Alphonsus (Wise, 1961 Apr 17) can be seen on/from (UTC): 2003 Apr 09/10 Puerto Rico (23:00-01:06) – *[check for colour]*

Event: Plato (Wise, 1961 Apr 17) can be seen on/from (UTC): 2003 Apr 09 Puerto Rico (23:00-23:57) – *[check for colour]*

Event: Plato B & D (Lade, 1889 Jun 06) can be seen on/from (UTC): 2003 Apr 09/10 Atlanta, Houston, Madison (01:00-03:36); Harrisburg, Las Cruces, Phoenix (02:00-03:36); DC, New York (00:00-03:36); Orlando (02:00-02:59); Pittsburgh (00:00-01:59); Puerto Rico (23:54-03:36); Winnemucca (03:00-03:36); Italy (23:54-00:39); UK (23:54-02:37) – *[B & D were referred to as extremely bright spots]*

Event: Plato (Markov, 1925 Jun 29) can be seen on/from (UTC): 2003 Apr 10 Los Angeles (07:46-08:59); Phoenix (07:46-08:51); Winnemucca (07:46-09:40) – *[check for light bands in shadow]*

Event: Terminator (Barker, 1932 Mar 16) can be seen on/from (UTC): 2003 Apr 11 Los Angeles (03:50-05:09); Phoenix (03:50-04:41); Winnemucca (03:50-05:15) – *[Check terminator for mistiness from Copernicus to 20S]*

Event: Barker's Quadrangle (Moore, 1949 Feb 09) can be seen on/from (UTC): 2003 Apr 13 Atlanta (07:30-08:59); DC, Harrisburg (07:30-08:41); Houston (07:30-09:45); LA, Phoenix, Winnemucca (07:30-10:54); Las Cruces (07:30-09:59); Madison (07:30-09:38); New York (07:30-07:59); Orlando (07:30-08:46); Pittsburgh (07:30-08:51) – *[check for visibility of this quadrangle of craterlets]*

Event: Herodotus (Haas, 1954 Aug 11) can be seen on/from (UTC): 2003 Apr 13 Italy (18:15-19:00) – *[check for grey shadow – note this is a repeat illumination event only]*

Event: Kepler (Lugo, 1954 Nov 07) can be seen on/from (UTC): 2003 Apr 14 Atlanta (01:00-01:02); DC (00:00-00:11); Harrisburg (00:00-00:08); Houston (01:00-02:08); LA, Winnemucca (03:00-03:43); Las Cruces (02:00-03:19); Madison (01:00-01:23); Orlando (00:00-00:37); Phoenix (02:00-03:34); Pittsburgh (00:00-00:27) – *[check for luminous spots (outside E. wall?)]*

Event: Aristarchus (Gabriel, 1972 Oct 19) can be seen on/from (UTC): 2003 Apr 14 Germany (01:50-02:59); Italy (02:56-02:59); UK (02:41-03:45) – [*check for colour in and around crater*]

Event: Plato (Taylor, 1972 Oct 19) can be seen on/from (UTC): 2003 Apr 14 Germany (02:36-02:59); Italy (02:36-02:59); UK (02:36-03:59) – [*Check for colour on walls especially the NW*]

Event: Cobra Head (Bestwick, 1955 Sep 28) can be seen on/from (UTC): 2003 Apr 14 USA & Puerto Rico – [*“Diffused patch of smoke or vapour, almost obscured, spread over plain for a short distance”*]

Event: Herodotus (Kozyrev, 1955 Oct 28) can be seen on/from (UTC): 2003 Apr 14 LA, Winnemucca (10:34-11:50); Las Cruces, Phoenix (10:34-10:59) – [*check in the blue, violet, UV*]

Event: Timocharis (Firsoff, 1954 Oct 10) can be seen on/from (UTC): 2003 Apr 15 Houston (10:16-10:53); LA, Phoenix (10:16-11:59); Las Cruces (10:16-11:42); Winnemucca (10:16-11:49) – [*check for colour/brightenings*]

Event: Aristarchus (Cook, 1989 Oct 13) can be seen on/from (UTC): 2003 Apr 15 Germany (19:00-20:46); Italy (19:48-20:46); UK (20:00-20:46) – [*development of V. bright blob/ghost crater ring on E exterior of crater*]

Event: Agrippa (Bartlett, 1961 Jul 30) can be seen on/from (UTC): 2003 Apr 19 DC (08:49-09:22), Harrisburg (08:45-09:22); New York (08:37-09:22); Pittsburgh (08:52-09:22) – [*visibility of landslide under NW wall*]

Event: Aristarchus (Pasternak, 1973 Dec 18) can be seen on/from (UTC): 2003 Apr 25 Italy (03:00-03:09) – [*check for brightenings on S wall*]

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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