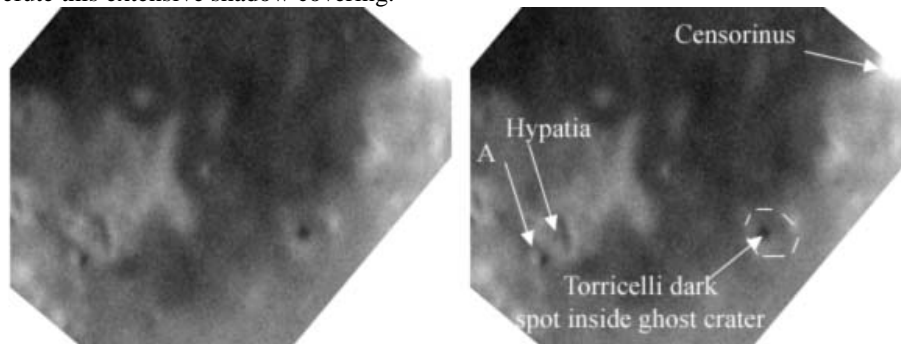


## **BAA/ALPO TRANSIENT LUNAR PHENOMENA**

**NEWS LETTER: 2004 Jan**

New year greetings for 2004! For November, observations have been received from: myself (UK), Clive Brook (Plymouth, UK), Maurice Collins (New Zealand), Marie Cook (Frimley, UK), David Darling (Sun Prairie, USA) Fernando Ferri (UAI, Italy), Robin Gray (Winnemucca, USA), Walter Haas (Las Cruces, USA), Raffaello Lena (GLR, Italy), Antonio Marino (UAI, Italy), Gerald North (Narborough, UK), and Brendan Shaw (UK).

On Nov 05, Brendan Shaw took images of Cape La Place and picked up a shadow even though the terminator was as far as 17 deg away. This was under identical illumination to a shadow seen in 1970 Aug 13 by Beraud, hence this original observation was not a TLP. On Nov 01 Marie Cook noticed what appeared to be a large ghost crater in the Torricelli area and secondly a very dark spot within this (17:45-17:50 UTC, 90mm Questar x80, seeing: Antoniadi III, transparency was poor). From Long Eaton, the Moon was below my usual safety net of 20 deg altitude, but I managed to capture some video through a 20cm Dobsonian - seeing was Antoniadi V. The image below (left) is at 19:59UTC and confirms the ghost crater (this is normal) and also the dark interior shadow to Torricelli. Now the Sun's altitude was 29 deg above the horizon at Torricelli and the crater is 2.1 km deep and 23km in diameter. Some simple maths will show that the shadow should not be filling "most" of the floor. Indeed, Hypatia A to the west is 15km in diameter and deeper at 2.5 km, but clearly has less shadow! Could seeing be to blame? Possibly not as the seeing in Frimley was III and the video was captured by me later has the apparent extensive dark shadow on many frames. Now one possible explanation is that the apparent large shadow might be the result of micro-shadowing on the floor of Torricelli – but this requires bumpy regolith with effective surface slopes of > 29 deg. However Plate 15a in the Hatfield Photographic Atlas is taken under similar illumination conditions to the image below, but does not show such an extensive shadow. So I would like to ask members to check any observations they have of the area close to colongitudes 359 to 1, to see if you can confirm/refute this extensive shadow covering.



Finally, if you have video of the Nov 09 lunar eclipse, please check for flashes seen at the following UTC times (taken off Brian Cudnik's web site): 00:30 (Darling: 480km W of Tycho), 00:40 (UAI: near S-W Moon border), 00:44 (Darling/Weier: Tycho), 00:46 (Darling: Tycho), 01:06 (Darling/Weire: Tycho), and 01:17 (Darling: 320km SW of Tycho).

The following repeat illumination and libration events occur for January:

Event: Aristarchus (Jean, 1967 Dec 13) can be seen on/from (UTC): 2004 Jan 04 Germany, Italy (16:00-16:25) – [Look for colour on rim]

Event: Plato (Amery/Foley, 1981 Jun 15) can be seen on/from (UTC): 2004 Jan 05/06 Puerto Rico (22:00-23:25); Phoenix (02:18-03:00) – [Look for a dark patch or smudge]

Event: Aristarchus (Foley, 1975 Oct 18) can be seen on/from (UTC): 2004 Jan 06 LA (02:18-03:15); Las Cruces (02:18-02:44); Winnemucca (02:18-03:04) – [Check for deep blue-violet colour in NW(NE?) interior corner]

Event: Aristarcus (Cook, 1989 Oct 13) can be seen on/from (UTC): 2004 Jan 06 Atlanta, LA, Las Cruces, Madison, Pittsburgh, Phoenix, Winnemucca (08:03-11:55); DC, Harrisburg, Houston, Orlando (08:03-10:59); Puerto Rico 08:03-09:56) – [image, sketch and monitor the brightness of bright blob/ghost-like crater on E. exterior of Aristarchus]

Event: Lichtenberg (Baum, 1951 Jan 21) can be seen on/from (UTC): 2004 Jan 06 New Zealand (08:00-08:23) – [Look for a temporary tiny red spot at 31.40N, 66.17W]

Event: Aristarchus (Kelsey, 1967 Feb 24) can be seen on/from (UTC): 2004 Jan 06/07 Puerto Rico (23:01-01:57) – [Check for colour on wall]

Event: Aristarchus (Granger, 1961 Jun 28) can be seen on/from (UTC): 2004 Jan 06/07 Germany, Italy, UK (22:59-04:52); Atlanta, DC, Harrisburg, Madison, New York, Orlando, Pittsburgh, Puerto Rico (23:56-04:52) – [*Check for enhancement towards the violet/UV end of the spectrum*]

Event: Aristarchus vicinity (Gruithuisen, 1842 Oct 18) can be seen on/from (UTC): 2004 Jan 07 Atlanta, Houston, Las Cruces, Orlando, Phoenix (01:42-04:30); Puerto Rico (01:04-04:30) – [*Check for colours in small spots in W & NW of crater*]

Event: Aristarchus (Bartlett, 1955 Oct 31) can be seen on/from (UTC): 2004 Jan 07 UK (07:51-07:55); Madison (08:56-12:59) – [*Check for blue/violet glare, especially on E, NE, rim*]

Event: Plato (Klein, 1878 Nov 09) can be seen on/from (UTC): 2004 Jan 07 New Zealand (09:00-10:28) – [*Look for faint white cloud-like feature*]

Event: Aristarchus (Farrant, 1967 Dec 16) can be seen on/from (UTC): 2004 Jan 07 Germany, Italy (16:00-16:46); Madison (12:49-12:59); Las Cruces, Phoenix (12:49-13:59); LA, Winnemucca (12:49-14:57) – [*Check for colour on NE and NW walls*]

Event: Aristarchus (Bartlett, 1955 Oct 02) can be seen on/from (UTC): 2004 Jan 08 Germany, UK (01:45-06:59); Italy (01:45-05:59); Atlanta, Orlando (02:20-07:05); DC, Harrisburg, New York, Pittsburgh (01:45-07:05); Madison, Puerto Rico (02:03-07:05); Houston, LA, Las Cruces, Phoenix, Winnemucca (02:46-07:05) – [*Look for violet glare on E, NE rim and check sharpness of crater*]

Event: Torricelli B (Foley, 1985 Dec 27) can be seen on/from (UTC): 2004 Jan 08 Germany (03:51-06:59); Italy (03:51-05:59); UK, Atlanta, DC, Harrisburg, Houston, LA, Las Cruces, Madison, New York, Orlando, Phoenix, Pittsburgh, Winnemucca (03:51-07:48); Puerto Rico (03:51-07:17) – [*Monitor relative intensity over time*]

Event: Aristarchus (Pasternak, 1973 Oct 12) can be seen on/from (UTC): 2004 Jan 08 Germany (06:45-06:59); UK (06:45-07:59) – [*Is there any hint of red in the bright region of the S. of the crater?*]

Event: Aristarchus, Bullialdus & Kepler (Wildev, 1962 May 20) can be seen on/from (UTC): 2004 Jan 08 Atlanta, DC, Harrisburg, New York, Orlando, Pittsburgh (09:48-11:59); Madison (09:48-12:59); Puerto Rico (09:48-09:59); Houston (09:48-10:59); LA, Las Cruces, Phoenix, Winnemucca (09:48-13:42) – [*Are these craters especially bright. Does Aristarchus have a red colour?*]

Event: Aristarchus and Ray near Bessel (Granger, 1961 May 31) can be seen on/from (UTC): 2004 Jan 08 Germany (16:00-16:03) – [*Check enhancement of UV/blue end of spectrum*]

Event: West Limb (Jean, 1967 Dec 17) can be seen on/from (UTC): 2004 Jan 08 Germany (16:00-17:56); Italy, UK (17:00-17:56) – [*Original observation doubtful! - reported a transient violet glow*]

Event: Proclus (Bartlett, 1956 Jul 25) can be seen on/from (UTC): 2004 Jan 09 Italy (18:00-20:48) – [*Check visibility of central spot (pseudo peak) within floor shadow*]

Event: Plato (Haas, 1938 Jul 15) can be seen on/from (UTC): 2004 Jan 10 Atlanta, DC, Madison, Orlando, Pittsburgh (01:00-04:19); Harrisburg, New York (00:22-04:19); Puerto-Rico (00:22-03:35); Houston (02:00-04:19); Las Cruces, Phoenix, Winnemucca (03:00-04:19); LA (04:00-04:19) – [*Check colour and brightness of floor*]

Event: Mader (Wildev, 1962 Apr 22) can be seen on/from (UTC): 2004 Jan 09/10 Germany, Italy, UK (22:06-05:25); Atlanta, DC, Madison, Orlando, Pittsburgh (01:00-01:59); Harrisburg, New York (00:00-02:00); Houston (-02:00) – [*Monitor brightness of crater over time - is it brighter or fainter than normal?*]

Event: Plinius (Haas, 1937 Jul 27) can be seen on/from (UTC): 2004 Jan 11 Phoenix (08:01-11:05); LA (08:01-11:32); Winnemucca (08:01-11:53) – [*Check brightness of E. end of central peak*]

Event: Aristarchus (Bartlett, 1956 Jun 28) can be seen on/from (UTC): 2004 Jan 12 Atlanta, DC, Harrisburg, New York, Orlando, Pittsburgh (03:29-07:12); Las Cruces, Madison, Phoenix (05:00-07:13); Puerto Rico (03:29-06:38); Houston (07:00-07:13); LA, Winnemucca (06:00-07:13) – [*Observe interior detail appearance and check crater for violet glare*]

Event: Aristarchus (Bartlett, 1956 Jun 29) can be seen on/from (UTC): 2004 Jan 13 Puerto Rico (04:21-06:40) – [*Check for faint blue/violet colour*]

Event: Near Ross D {24E, 11N} (Harris, 1964 Mar 21) can be seen on/from (UTC): 2004 Jan 29 Germany (16:00-17:50); Italy, UK (17:00-17:50) – [*No details given - possibly unreliable observation?*]

Event: Eratosthenes (Bartlett, 1976 Aug 04) can be seen on/from (UTC): 2004 Jan 30 Germany (16:00-17:08); Italy, UK (17:00-17:08) – [*Can you see the central peak? Also check inner NW wall for blue radiance*]

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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