

I would like to apologize for not giving a video presentation at the Winchester Lunar Section meeting. My father, who apart from giving his own talk at Winchester was acting as a courier for the tape, was unable to attend due to a brief illness. Hopefully these two presentations can be given another time? At the time of writing (Apr 9th) observations for March have been received from the following observers: Raffaello Braga, Clive Brook, Marie Cook, and Fernando Ferri. Based upon new observations received, our total European observing time for Nov-Feb was as follows:

Month	Duration	Observers	Month	Duration	Observers
<i>Nov 2001</i>	<i>426 min</i>	<i>CD, RB, MC, GN</i>	<i>Jan 2002</i>	<i>217 min</i>	<i>CB, RB, MC, SB</i>
<i>Dec 2001</i>	<i>215 min</i>	<i>CB, RB, MC, GN</i>	<i>Feb 2002</i>	<i>150 min</i>	<i>RB, MC, MH, GN</i>

March was a busy month! Firstly since the last circular, I received a communication from Walter Haas (ALPO), via Richard Baum, requesting observations of Herodotus on 2002 Mar 25 UTC 20:47. At this time the illumination (but not viewing angles) were predicted to match closely those of an observation Walter made on 1954 Aug 11 UTC 02:28 when he noticed Herodotus as having a grey shadow in comparison to the black shadow of Aristarchus. During a predicted illumination repeat on 2002 Feb 24 UTC 05:15-05:35, Walter thought he saw a similar effect. Well I contacted some observers and reports have been received from Fernando Ferri, Raffaello Braga, and Marie Cook. Our Italian colleagues reported no differences between the shadow density of Aristarchus and Herodotus. My mother noted that the black shadow in Herodotus was not as dark as that in Aristarchus, but this was probably a contrast effect due the brightness of the illuminated inner wall of Aristarchus under poor transparency. Incidentally a predicted "illumination angle only" repeat is due around May 23 UTC 21:02, so if you have a chance, please compare shadow densities of Aristarchus and Herodotus - just in case.

On 2002 Mar 29 I received an email from Clive Brook saying that he had observed a gradual brightening in Aristarchus 02:20-02:36UTC. However during 02:36-02:38UTC the crater dimmed noticeably. Then at 03:40 UT, he noted some changes in brightness lasting 30sec to 1 min, but by 04:15 he saw no further fluctuations. Unfortunately by the time I received his initial email I suspected that the Moon was already getting too low in European sky's to issue a Lunar Section TLP alert. Instead, being clouded out myself SW of D.C., I phoned David Darling (ALPO TLP coordinator) in Wisconsin and he was able to conduct some visual photometric measurements. David observed from 04:51-05:57UTC. Initially 04:51-04:58UTC, Aristarchus, Proclus, and Censorinus appeared to be equally bright at 10.5. From 05:11-05:18UTC, and possibly early, cirrus-haze intervened and caused a dip in Proclus and Censorinus to 9.5 in brightness. Then at 05:18-05:37UTC a clear view of the Moon returned with Aristarchus remaining mostly around 10.5. Proclus dipped to 9.5 at 05:27UTC and there was a slight dip in Censorinus to 9.7 at 05:36UTC. As yet I do not have information on the error bars of these measurements, but David sounded sure of the brightness dip in Proclus. Incidentally Marie Cook was observing earlier on 2002 Mar 28/29 UTC 23:50-00:25, and found significant variations between Proclus and Censorinus, and to a lesser extent in Torricelli B e.g. Proclus equal in brightness to Censorinus at 00:04 (white light) & 00:14 (yellow filter), but Proclus twice as bright as Censorinus at 00:09 (blue filter) & 00:19 (red filter), however as these were obtained through different filters things are more complicated to understand. Could these effects somehow be seeing related? Certainly it is unlikely to be due to scintillation - these craters being of similar angular size to planets should not scintillate! However I also find it hard to believe that such large craters, should at different times suffer short term brightness dips. Its a pity that none of the observations overlapped - if so it would have been possible to prove or rule out atmospheric effects. Just as an experiment, try making your own visual comparisons of the relative brightness of Aristarchus, Proclus, Censorinus and any other crater of your choice, say at 5 or 10 min intervals. Do this on one night any day +/- 2 days either side of Full Moon and send me the results. Small scopes, binoculars, or large scopes at low powers can be used for this.

Whilst updating my TLP database with 1980's era TLP, it predicted that both illumination and viewing (libration) angles for the famous 1983 Jan Torricelli B TLP would reoccur to within +/- 1 deg of both illumination and viewing angles on 2002 Mar 29 UTC 20:30-24:30. Due to topocentric libration effects, this would be more similar than the prediction for Feb 2001. Again some observers were contacted days in advance and warned to observe. The intention was that if any brightening or coloration was observed, a TLP alert would be put out. However any effects present were not learnt about until the reports were received. Reports collected to date include: Fernando Ferri - clouded out but reports that Albino Carbognani, an UAI observer conducted visual observations and CCD 20:00-00:30 but reported no obvious

anomalies. Marie Cook observed 23:00-00:35UTC and noted that up to 23:20 a bright spot to the SE wall was seen, but gone later. She also detected some slight filter/relative brightness differences noted between Torricelli B and other craters. Rafello Braga reports that at 20:50 UT and without any filter, the brightness of the east wall of Torricelli B was halfway Torricelli C (faintest) and Moltke (brightest). By inserting the red filter W25 the crater was slightly more evident. However with the blue 38A filter the crater disappeared completely, while Torricelli C remained visible - even if faintest when observed in white and red light. Marie Cook reports that this is often the case, but I need further time to digest these reports for analysis - so more at a later date!

Changing the subject - if you would like to attempt to observe faint sporadic impact flashes in Earthshine during June, the following three days offer excellent views of Earthshine (% sunlit illuminated): Jun 15 UTC 21:20-21:40 (26%), Jun 16 UTC 21:20-22:05 (37%), and Jun 17 UTC 21:20-22:25 (49%).

TLP search schedule in UTC for lunar features in general + Aristarchus (Ar), Alphonsus (Al), and Gassendi (Ga):

Jun14 20:20-21:05	Jun15 20:20-21:40	Jun16 20:20-22:05
Jun17 20:20-22:25	Jun18 20:20-22:40 (Al)	Jun19 20:20-22:50 (Al)
Jun20 20:05-22:50 (Al)	Jun21 20:20-22:30 (Al,Ar,Ga)	Jun29 02:50-03:50 (Al,Ar,Ga)
Jun30 02:25-03:50 (Al,Ar,Ga)		

Finally on Jun 22 20:35-23:20UTC, the "illumination" and "viewing" conditions will repeat for a TLP seen by Richard Baum in 1948, involving a patch NE of the crater Philolaus. Conditions will be far from ideal though as the Moon will be at an altitude of < 15 deg - so watch out for spurious colour.

Please post all letters/TLP reports to: *Mr & Mrs Cook, 6 Lakeland Drive, Frimley, Camberley, Surrey, GU16 8LD*. If you see possible TLP, my contact times (in local UK time) are as follows: WEEK DAYS any time up till 2:15AM on: (USA) 202 633 9748, WEEK DAYS after 3AM or WEEKENDS (any time) on: (USA) 703 751 3365. Tony Cook, PO Box 37012, Center for Earth and Planetary Studies, National Air and Space Museum, MRC-0315, Washington, D.C. 20013-7012. USA. Email: tcook@nasm.si.edu