

ALPO/BAA TRANSIENT LUNAR PHENOMENA

2005 MAY

Observations for March have been received from Jay Albert, (USA), Michael Amato (USA), Clive Brook (UK), David Darling (USA), Gerald North (UK), Don Spain (USA). Observers from two countries were represented by the observing network, they were the USA and United Kingdom. For this month 9 days were covered giving us a 31% coverage for this lunation, these dates are 11, 13, 14, 15, 16, 17, 18, 21, 26.

During the March some 52 lunar features were monitored. Those observed more than once are followed by the number of separate observations presented: Aristarchus = 2, Aristoteles, Aristillus, Atlas = 2, Albatagnius, Alphonsus = 2, Alpine Valley, Arzachel = 2, Ariadacus Rill, Autolycus, Cape Agarum = 2, Catharina, Censorinus, Cobra Head, Copernicus, Cyrillus = 2, Catharina, Berosus, Earthshine = 3, Eudoxus, Eratosthenes, Endymion = 2, Fracastorius, Gassendi, Gauss, Grimaldi, Gutenberg, Hahn, Hercules, Hipparchus, Hyginus Rill, Langrenus, Mare Crisium, Mare Imbrium, Messier Twins, Maurolycus, Mons Piton, Petavius, Piccolomini, Plato = 2, Posidonius, Proclus = 4, Ptolemaeus = 2, Rheita, Rheita Vallis = 2, Rupes Altai, Sacrobosco, Schroteri, Vallis, Theophilus = 2, Torricelli B, Triesnecker, Tycho.

FLARES ON THE MOON: Of the many different kinds of LTP events reported on the Moon, such as color events, glows, obscurations, and contrast effects, the most dramatic are brilliant flashes: The most notable event took place on 15 November 1953, when Dr. Leon H. Stuart, using a 8" reflector, photographed a brilliant flash located near the Pallas region of the Moon. It was believed that he may have recorded an impact of a large meteorite. When interest in this observation was renewed and a detailed examination of the evidence done, it was found that no impact crater could be located in the location where the flare took place (but spacecraft image resolution was 100m). Some individuals, such as Winifred Cameron, believe that what was photographed was volcanic in origin and not an impact at all. This was the case for me as well with my encounters with this kind of phenomena only happening after observing many dozens of hours. The following is a listing of observations witnessed by other observers and myself.

21 April 1988 at 02:00 UT: Don Spain observed two tiny flashes in the earthshine region of the Moon. They lasted only a fraction of a second and were about magnitude 7. Both flashes were reddish in color and both occurred in the vicinity of the crater Aristarchus.

9 February 1989 at 00:15 UT: I observed 3 star like flashes near the Mare Humorum basin which was deep into the earthshine region of the Moon. The 3 flashes were twice as bright as Aristarchus.

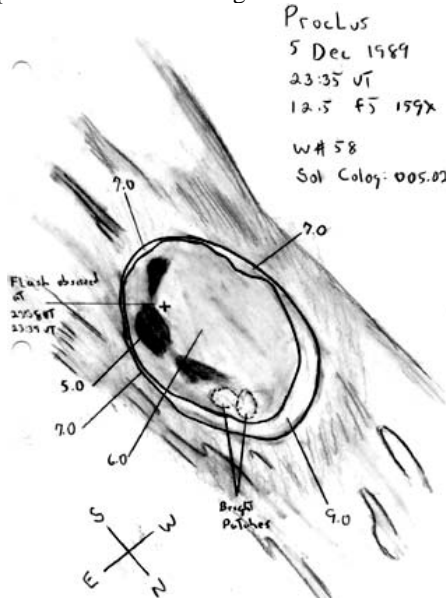


Figure 1 Proclus 5 Dec 1989

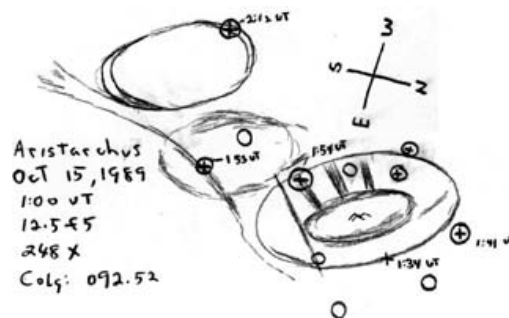


Figure 2 Aristarchus 15 Oct 1989

5 December 1989 at 23:35 UT: I witnessed a brilliant flash inside the crater Proclus. It was extremely bright and lasted only for a moment (see Figure 1). My observing journal is filled with numerous accounts of individual flashes being seen. I have generally assumed that these events were caused by fluctuations in seeing and the flash consisting of a small crater to small to be seen until the seeing steadies

for a moment. Or they were the cause of a small meteor impacting into the lunar surface. Generally these reports would only consist of sporadic events with there being only a single flash event.

1 March 1990 at 02:15 UT: Flash seen by Dr. Denny Fryback by the crater Pytheas in earthshine.

3 May 1990 at 02:03 UT: I observed a flash inside the sunlit crater Alphonsus.

28 May 1990 at 02:51- 02:56 - 03:04 UT: I saw three flashes in earthshine region that were very bright and lasted only for a moment.

The following two reports describe flare activity that is beyond single reported events. The first was on December 30, 1982 total eclipse of the Moon. The totality was so dark that the Moon disappeared completely during its passage into the umbra. There were two of us observing; Mark Harris using a 6" f6 Newtonian and myself with a 12.5 f5 Newtonian. I saw the first 2 flashes. The flashes appeared about as bright as the stars around the Moon and lasted only a fraction of a second. My fellow observer, Mark Harris observed a total of 6 flashes and I saw the same amount. Never have I seen such a phenomena during a lunar eclipse before or since.

On October 14, 1989 my wife received a call at 12:45 A.M. my time from Peter Foley of the BAA TLP section. He reported that Aristarchus was reported to have bright points and the interior of the crater was exceptionally clear. I was at the hospital staying over night with my son at that time so I did not get to observe the Moon until that evening at 7:45 P.M. on 14 Oct or 00:45 to 01:59 on 15 October 1989 UT. When I began the observing session I noticed a bright glitter or points inside the crater. I saw the first flash when I was talking to Dave Weier on my cordless telephone. Upon hearing this he decided to come over to observe with me. He only lived 6 miles away so it would not take him very long to arrive. While I was waiting for Dave Weier to arrive I saw two flashes as bright as the central peak of Aristarchus, one was located between Herodotus and Aristarchus and the second one on the northeast of the crater rim. I decided to do a drawing of the crater and region (see Figure 2) so as to mark down the locations of the flares. While I was doing the drawing I saw another flash due south of Herodotus located on the cometary plume. While looking through the telescope again I saw two more flares. When Dave Weier had arrived and began observing he saw 3 flares during the next 40 minutes of observing. Between the two of us we saw 18 flares on and around the crater Aristarchus. I have documented the location of these events on the drawing enclosed with this story. The seeing that night was the best I have seen with the detail inside the crater. Both Dave Weier and myself agreed that the seeing was exceptional and the clarity of the interior of Aristarchus was the best we had ever witnessed. The Moon was at it closest approach or at perigee for the year.

It is unclear what this phenomena could be. It has been confirmed that some of the flares are only reflection off of solar panel of satellites. Some may be caused by tiny craters popping into view during moments of perfect seeing. Other flashes have been the results of possible meteor impacts. To date, with these reported impacts, no impact craters have been found. Whatever the cause may have been though, the mystery deepens since no one can seem to find the smoking gun from these brilliant explosions. So whatever these flashes are, they continue to amaze the lucky observer whose view of the Moon is interrupted by one of these intruders.

Good Hunting! **David Darling, Tel. (USA) 608 837-7787, Email: DOD121252@aol.com**