

Observations for the month of January 2005 have been received from Michael Amato (USA), Clyde Brook (UK), Albino Carbognani (Italy), Anthony Cook (UK), Marie Cook (UK), David Darling (USA), Robin Gray (USA), Gerald North (UK), Raul Salvo (Uruguay), Frank Serio (USA), Don Spain (USA), Robert Spellman (USA), and Myron Wasiuta (USA). Four out of the eleven countries represented by the observing network submitted observations. For this month eleven days were covered giving us a 27.5% coverage for this lunation, these dates are 2nd, 15th, 17th, 19th, 21st, 22nd, 23rd, 24th, 25th, 26th, and 28th. .

During the observing period 30 lunar features were monitored this month. Those listed in bold are those that had L.T.P. reported. Those observed more than once are followed by the number of separate observations presented. Aristarchus = 8, Aristoteles, Aristillus, Atlas, Alphonsus, Baily, Caucasus Mts, Cape Agarum, Cobra Head, Daniell, Earthshine, Eudoxus, Gassendi, Grimaldi, Hercules, Janssen, Langrenus, Linnie, Madler, Mare Crisium = 2, Mare Nectaris, Messier Twins, **Mutus F**, Plato = 4, Proclus = 5, Petavius, Stofler, Theophilus, **Torricelli B = 8**. More will follow concerning the Torricelli B report as the observations are examined in greater detail.

This month I want to bring us all up to date on where we are concerning the Smart 1 mission to the Moon and as a team of observers. As a group of observers I believe that we are in a unique position and better prepared than any past program to document this elusive lunar transient phenomena.

Before we proceed further we should take a look at past observing programs and their accomplishments and failures, and learn from these earlier attempts to monitor the Moon on a world wide basis.

The first group was very active during the Apollo 10 through 12 missions which took place from May 1969 to November 1969 when astronauts were in orbit around the Moon and from Apollo 11, walking on its surface. This program was an international group of observers called the Lunar International Observing Network or LION, under the leadership of Miss Barbara Middlehurst who had been doing this for several years, and now included 215 astronomical observing stations in 30 countries. Her network consisted of professional and amateur astronomers who were interested in the study of lunar transient phenomena. Through pre-planned, and concentrated observing efforts this network had the ability to monitor the surface of the Moon 7 days a week and 24 hours a day. The main objective of this program was to record the nature, magnitude, frequency and distribution of the lunar transient phenomena. They had high hopes of having independent confirmation of an event from widely separated ground based locations.

The following was reported in the Smithsonian Institution Center for Short-Lived Phenomena Annual Report 1969 "During the Apollo 10,11,12 missions the Center for Short Lived Phenomena received a total of 169 TLP reports in 31 areas from 28 observing stations in 19 countries."

"At least six series of simultaneous or overlapping TLP observations were reported during the Apollo 11 mission. These were all made in the crater Aristarchus on 19 July 1969 between 1845 to 2400 GMT. At least 12 observers from 6 countries on two continents and in lunar orbit made either simultaneous or over-lapping observations of Aristarchus activity during this 5 hour and 15 minute period."

Between 1845 and 1847 GMT the Apollo Astronauts reported "Illumination" on the northeast wall of Aristarchus. Pruss and Witte (Institute for Space Research, Bochum, Germany) independently reported a 5 to 7 second ½ to 1 magnitude brightening of Aristarchus at 1846 GMT. Between 1930 and 2400 GMT Gervais (Lodeve, France), Oliver (Sabedel, Spain), Da Silva, Mourao, and Cardoso (Rio de Janeiro, Brazil), Moseley (Armagh, Northern Ireland), and Vasquez (Valparaiso, Chile) all reported activity in Aristarchus."

"These observations represent the first reported simultaneous or over-lapping TLP observations 1) from Astronauts in lunar orbit and ground-based observers, and 2) from ground based observers on different continents."

The next ground based observing programs that worked in conjunction with one another was the Argus Astronet which consisted of a rather interesting group of amateur astronomers who were also "radio hams" combining their two amateur interests by exchanging their reports of lunar observations in real time by radio. Their reports were carefully monitored by the Corralitos observing staff using a Drake 2B short wave receiver. A large number of events that were reported were immediately checked by the staff of The Corralitos Observatory Program for the Detection of Lunar Transient Phenomena. Unfortunately, there were no confirmations made by Corralitos Observatory that were reported by Argus Astronet. To learn more

about this program you can read NASA CR-147888 The Corralitos Observatory Program for the Detection of Lunar Transient Phenomena.

The next program consisted of the Moon-Blink-Operation when a device was developed by J.J. Gilheany of Trident Engineering Associates. This detector combines an image converter tube with a rotating filter wheel that intercepts the telescope image of the Moon. The tube views the Moon alternately through red and blue filters, but the light intensities are balanced so that the observer sees no noticeable flicker in the final black-and-white image, under normal conditions. More can be learned about this program by reading the article in *Sky & Telescopes* March 1966 on page 137. Not much more was printed about this program so what ever became of the results and the special instruments developed may never be known.

The next program that took place was the one fielded by three amateur astronomers, members of Madison Astronomical Society of Madison, Wisconsin. They were Robert Manske, David Weier, and myself. We organized a ground based observing program during the Clementine mission to the Moon. From a list 75 observers from all parts of the world 51 people responded affirmatively, and of these 33 submitted reports. We received reports for 30 nights during the period from 28 February to, 28 April 1998. During this time period 324 observations were submitted, and 30 L.T.P. reports were submitted.

The Lunar Prospector mission which lasted for about 1 year, and was the next opportunity that I had to coordinate observers to monitor the Moon for L.T.P. From a list of 75 observers from around the world 20 responded affirmatively. 16 people submitted 246 observations. Of these observations 32 were reported as possible L.T.P. events.

This brings us up to present day where we are waiting for the skies to clear so we can monitor the Moon for the Smart 1 mission. For this mission I have sent out over 1000 invitations to individuals and astronomy clubs from around the world to join me in watching the Moon for L.T.P. events during the up coming Smart 1 mission. To date, I have had about 90 individuals respond with some already sending in observations. These observers are located in 19 countries all around the world, with the greatest concentration of observers being located in the United States.

The mission is a "go" and the Smart 1 spacecraft has been sending back its first photographs. I want to encourage you to begin observing and just as important to submit your observations of what you saw. Good intentions is the first step toward a great observation. This project will be successful when observers will take the next step and send in their reports whether they are just a routine report or the more exciting L.T.P. event. When all the data is submitted and pieced together the Moon comes alive as it only can when it's being monitored 24 hours a day 7 days a week.

We have a great opportunity to make a real contribution to science with this mission and continues long into the future. There will be many upcoming moon shots preceding mankind's return to our nearest neighbor, beckoning us to return to the eyepiece and once again view the stark beauty that our nearest neighbor displays.

Good Hunting! David Darling, Tel. (USA) 608 837-7787,

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