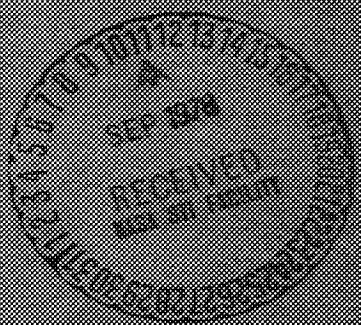
78-03

National Space Science Data Center/
World Data Center A For Rockets and Satellites

Lunar Transient Phenomena Catalog

July 1978



NSSDC/WDC-A-R&S 78-03

Lunar Transient Phenomena Catalog

Winifred Sawtell Cameron

July 1978

National Space Science Data Center (NSSDC)/
World Data Center A for Rockets and Satellites (WDC-A-R&S)
National Aeronautics and Space Administration
Goddard Space Flight Center
Greenbelt, Maryland 20771

CONTENTS

INTRODUCTION

This catalog, which has been in preparation for publishing for many years is being offered as a preliminary one. It was intended to be automated and printed out but this form was going to be delayed for a year or more so the catalog part has been typed instead.

Lunar transient phenomena have been observed for almost 1 1/2 millenia, both by the naked eye and telescopic aid. The author has been collecting these reports from the literature and personal communications for the past 17 years. It has resulted in a listing of 1468 reports representing only slight searching of the literature and probably only a fraction of the number of anomalies actually seen.

The phenomena are unusual instances of temporary changes seen by observers that they reported in journals, books, and other literature. Therefore, although it seems we may be able to suggest possible aberrations as the causes of some or many of the phenomena it is presumptuous of us to think that these observers, long time students of the moon, were not aware of most of them. One exception may be certain phenomena seen at solar eclipses that may be the Bailey's Beads phenomenon, not described till 1836. It seems as if most of W. H. Pickering's observations of phenomena near Schröter's Valley could be ascribed to varying lighting conditions. However, Pickering published papers on varying lighting aspects so therefore, he was very aware of the problem.

In recent years, several hypotheses have been offered as to the causes of these phenomena. Some hypotheses offer external influences while others suggest internal forces at work, possibly affected by external forces. The author has analyzed the data with respect to several of these hypotheses (*Cameron*, 1967, 1968, 1972, 1976, 1977). Others have also analyzed some of the data, usually with respect to a single hypothesis (*Burley and Middlehurst*, 1966; *Chapman*, 1967). There are two recent suggestions or hypotheses that have been offered that cover two kinds of phenomena that make up a large portion of the catalog. The first of these is the star-like points. (The author has designated five categories, viz. Reddish, Bluish, Brightenings, Darkenings, and Gaseous as covering the vast majority of phenomena.) Star-like points would be classified in the Brightenings category. This is the only type of LTP the author has ever seen. Because of these experiences, the author suggests that these phenomena result from a combination of geometric and instrumental effects. The geometry involves the relations of sun angle, earth angle, and surface slope. The instrumental effect is found in the power (and perhaps the aperture) used on the telescope. Low powers produce the star-like point whereas high powers spread out the light and reduce the contrast and it is a bright area rather than a point.

The second type of phenomenon is the Bluish. Blue or violet is frequently seen on Aristarchus, the brightest of all lunar features. It occasionally

has been seen on other features, e.g. Grimaldi (a dark-floored crater), but almost always is reported for Aristarchus and largely by *Bartlett* (1967). It usually is described as a glare. It has been proposed by *Fitton* (1975, 1977) that it is spurious and caused by terrestrial high pressure systems with temperature inversions that are located east of the observer. He can predict the location in craters of the bluish and reddish colors and they differ for bright and dark areas surrounded by the opposite. Many or most of the bluish phenomena fit his conditions. Some do not so there may be real phenomena mixed in among the spurious.

The catalog includes all reported phenomena regardless of value of the observation. The author has chosen to include all because people may differ as to what should be excluded. Others who have produced LTP catalogs have excluded some observations that they deemed of little or no value. I question some of their exclusions. This catalog indicates the author's asessment of the weight of the observation. Weights range from zero (no value or not a lunar phenomenon) to 5 which is the highest. I admit to some inconsistency in the evaluations as I would change my mind about some things through more knowledge. In general 0 means it likely has some other cause or in a few cases, the observer was very inexperienced. A value of 1 is barely better, but may have some merit. Usually there is little description. A value of 2 may be given if the information is poor, or perhaps more than one observer saw it, but probably not independently. A value of 3 was given when it was a single, probably good observer. For very experienced, good single observers, I rated the observation 4. For confirmed or permanently recorded observations, e.g. photographs, photometric recordings, spectra, etc. a value of 5 was given. Since not all reported phenomena are likely real lunar phenomena, I have asterisked those that I think were likely to be truly lunar anomalies. In the case of the bluish phenomena reported by Bartlett, generally they may be explained under Fitton's hypothesis. In some cases, though, he describes it as a radiance. The word connoted a medium to the author. Subsequent correspondence with Bartlett gained concurrence by him. These then, may be truly lunar and are asterisked. The user, of course, can evaluate the observations by his own scheme.

The catalog includes the observations found in the (MB) Middlehurst-Burley catalog (1966), the (MBMW) Middlehurst, Burley, Moore and Welther catalog (1968), the extension of the latter by *Moore* (1971), catalogs by *Classen* (1969, 1970) and the Apollo mission watch reports put out by LION (1970-1973). Therefore, this single catalog should contain nearly all observations reported in the readily available literature. In order to analyze the data for various hypotheses, many ancillary data were required. These data are not always readily accessible to users, especially those not in or near large cities or universities with astronomical departments. These and some additional quantities are given. It enlarges and complicates the catalog, but I think it is very useful. Because of these data, I was able to find mistakes in other catalogs and reports. These are pointed out by remarks from the author which are parenthesized in the phenomena description

column. These remarks may be helpful to users in evaluating and using the reports.

There are 23 columns, some of which have more than one quantity given. Explanations of each column are given below. Abbreviations are liberally used. Column one is a running serial number. It should give the total number of entries by the last number. However, there are five observations that are inserted (after the table had been typed) in their proper chronological order within the tables. They are 62a, 376a, 873a, 1161a, and 1211a. Therefore, there are 1468 rather than 1463 entries. Errors or new observations were found after that part of the table had been typed. In a few cases (from July 20, 1969 - the first manned landing on the moon) the number is asterisked. The asterisk means the observation was made from the vicinity or on the moon. The astronauts observed some phenomena and the emplaced scientific instruments recorded some. Column 2 gives the UT Gregorian date of observation or Calendar in use at the time for the earliest ones; Universal time (UT) is Greenwich Mean Time. For U.S.A. observers local time is at least 4 hours (Eastern daylight savings time) less and up to 8 hours less (Pacific Standard Time) than UT. If time was reported as local time, it was converted into UT and often this would move it into the next calendar date UT. The earliest observation was in 557 A.D.! For brevity only the last two digits of the year are given. The century is given in the center of the page at the top just under the headings, (the first page contains several centuries). The order given is in the American convention with the month first, the day second, and the year third (m/d/y). The third column is the UT time interval of observation in hours and minutes. Where a question mark appears, no time was given, but has been guessed at by the author from such information as the age of the moon, the location of the observer and the status of the observer (vocational astronomer or amateur astronomer). The time should be fairly accurate to within 6 hours and probably closer. Exceptions might be when the phase is near full. Occasionally a colon appears, which means the exact time is uncertain, but is probably very close to it. It may appear for an observation of a phenomenon during lunar eclipse in totality. Knowing the time of totality, one can pinpoint the observation time quite closely, though the time was not identified but the author has guessed, and then it is followed by a colon. Column 5 gives the approximate selenographic coordinates (read off Elger's map) of the center of the feature or area. Column 6 gives a very brief description of the phenomena. When parentheses occur, these are the author's remarks. Column 7 gives the dates of perigee that surround the date of observation (upper figure is before, lower one is after). Date is given as month, day, and hour of perigee. Column 8 gives the apogee date that falls between the two perigee dates in the same format as for perigee. Column 9 gives the horizontal parallax in minutes and seconds of arc for the two perigee dates (πp) in the same position as in the perigee dates column, the apogee date (πa) and for the date and time of observation (π). Ancillary data are given for those cases of guessed times. The horizontal parallax is needed to calculate the phase of the true anomaly. Column 10 gives the duration of the phenomena. Sometimes

it is the observing interval and not always the duration of the event. Column 11 gives the moon's age in days. Column 12 gives the phase of the anomalistic period (ϕ), where a full period (measured from perigee to perigee) is 1.0. Perigee is 0.0 (or 1.0) and apogee is 0.5. Two figures may be given here. The upper one (π) is the true anomaly phase derived by calculation from the following approximate formulae

$$\text{COS } E = \frac{\frac{1}{\pi_a} + \frac{1}{\pi_p} - \frac{2}{\pi}}{\frac{1}{\pi_a} - \frac{1}{\pi_p}} \qquad V^\circ = E^\circ + 5.89 \sin E$$

$$\phi_\pi = \frac{V^\circ}{360^\circ}$$

where E = eccentric anomaly, π_a = apogee horizontal parallax, π_p = perigee horizontal parallax, π = horizontal parallax of observation, V = true anomaly. The lower figure (d) is the anomalistic phase ϕ_d derived by the formula

$$\phi_d = \frac{D_o - D_{p1}}{D_{p2} - D_{p1}}$$

where D_1 = date of perigee immediately prior to observation and D_{p2} = date of perigee immediately following date of observation, and D_o = date of observation. Where only one figure is given, it is usually the d value. The latter is less accurate because it assumes a circular orbit for the moon, whereas the π formulae take eccentricity into account. Column 13 gives two quantities, the upper one is the colongitude (colong.) of the sun (longitude of the rising sun terminator where 0° is the center of face longitude = 1st quarter and 180° = last quarter); and the lower figure is the distance of the feature from the terminator (term. dist.). If a minus sign precedes it, the feature is in the dark and the sun has not risen on it yet. If it is preceded by a plus sign, the feature is in the dark and the sun has set on it. No sign indicates it is in sunlight. Column 14 also gives two quantities; the upper one is the number of days from full moon (days from FM) where minus means before and plus means after full moon (FM). The lower datum gives the date of the nearest full moon (nr. FM) to that of the observation. It gives the month, day, and hour of that full moon. Column 7 through 14 data were obtained from the American Ephemeris and Nautical almanac and/or Morrison, B. L., U. S. Nav. Obs. Circ. No. 112, No. 119, and No. 130, which are respectively: Phases of the Moon from 1800-1959, Phases of the Moon from 1960-2003, and Perigee and Apogee of the Moon 1959-1999. Age data also were obtained from Goldstine, H. H. 1973, New and Full Moons 1001 BC to AD 1651, Mem. Amer. Philosoph. Soc. 94. Column 15 gives two datums, the upper two figures are respectively the highest Kp index value for any 3h time period during that calendar day of the observation, and the sum of the eight 3 hourly values of Kp for that calendar date. These data are found (from 1932-1962) in J. Bartels Geometric Planetary Indexes Kp, Ap, and Cp, 1932-1961, IAGA Bulletin #18, and after 1961 in Journal of Geophysical Research with J. Virginia Lincoln as author. The Kp index (which ranges

from 0 to 9) is an index of the variations of the Earth's surface magnetic field which is affected by plasma from the Sun and the interplanetary magnetic field (IMF). Magnetic storms are indications of when enhanced solar plasma interacts with magnetic field of the Earth. The sudden commencement (SC) of a magnetic storm on Earth may be observed. If the commencement is not observed but a magnetic storm was observed in progress it is designated MS. These are given as the lower datum. SC-1 means the lunar observation date occurred one day before a magnetic storm started on Earth and SC or MS + 1 means the lunar observation occurred one day after a terrestrial magnetic storm occurred. Sometimes an aurora was noted and this is designated A. These are effects caused from solar plasma and the IMF, particularly the sign of the Z component. Column 16 gives the name of the observer. Column 17 gives the observer's location (city and state (or country)). Column 18 gives the size (in inches) of the aperture of the telescope used (Ap), the kind (K) of telescope used where L = reflector and R = refractor, and the power used (pw). Column 19 gives the observer's estimate of seeing conditions (S) where E = excellent, VG = very good, G = good, F = fair, P = poor, or an evaluation on a scale of 0-10 where 0 = very poor and 10 = best, or Antoniadi's scale (I to V) where I = excellent and V = very poor. Transparency (T) in which the faintest magnitude star discerned by the eye is given and ranges from (0-6) where 0 is the brightest of stars and 6 is the faintest seen (very transparent). In one case the behavior of a star's disk, both blow-ups (BU) interval, and excursion (exc) interval was given. These are quantities that observers obtained under the author's direction in an LTP observing program. Such quantities are useful for comparing LTP variations with terrestrial seeing, of which blow-ups and excursions of star images are manifestations. Column 20 lists the first place or person from which the author obtained information on the report. The symbols are the following: AADC = Argus/Astronet Data Center; ALPO = Association of Lunar and Planetary Observers. (When followed by a letter, it is the first letter of the name of the lunar recorder that submitted it to the author, where R = Ricker, W = Westfall); Bl = Blizard; Bo = Botley; Br = Brunk; Cl = Classen; F,C = Florenskiy and Chernov catalog; Fi = Firsoff; F = Fort; G = Green; Gr = Greenacre; K = Klado catalog; LION = Lunar International Observing Network; M = Middlehurst; MB = Middlehurst-Burley; MBDC = Moon Blink Data Center; MBMW = Middlehurst, Burley, Moore, Welther Catalog; Mo = Moore; P = Pala; Pa = Palm (many of which were copied from a presentation at the American Geophysical Union Meeting; Sh = Shoemaker; SI = Smithsonian Institute Center for Short-lived Phenomena. See references below for the catalogs' full reference titles. Where there is a blank, the author found the report herself in the literature. Column 21 gives the appendix reference which is the original source or a more original source of the observation report. The author has not checked out all the references, as not all sources were available, nor has time permitted. Many were repeated from MBMW (see reference below). In this column, PC = private communication. Column 22 gives the author's assigned weight to the observation as described above. An asterisk indicates the author thinks it was likely a real lunar phenomenon though not necessarily from

internal releases. The last column, 23 gives the author's classification or category of type of phenomena, where B = brightening, D = darkening, G = gaseous (something about the description implies a medium was involved), R = reddish (which includes anything from yellow to Infrared in the spectrum), and V = bluish (which includes anything from green to ultra-violet in the spectrum). Often an event will be comprised of more than one category. There were a few instances when an event was not classifiable in any of these categories and is therefore blank.

The earlier observers were usually given high weights as they were selenologists whose primary vocation was observing and studying the moon. Undoubtedly, their observing notebooks contain many instances of changes, but only the most unusual were published. Such observers as Patrick Moore and Percy Wilkins, although considering themselves amateurs, should be considered professionals by their long experience. Bartlett is an assiduous, experienced observer and has been rated high although most of his observations are of bluish phenomena on Aristarchus, which may have their cause in terrestrial conditions, rather than lunar. If the user does not accept that explanation, then most of Bartlett's observations are very good.

Immediately below are the sources and references from which the author obtained much of the observations. Following these is the Appendix References to which Column 21 is keyed. In regard to the Appendix References, the reviewing and checking process revealed that several references were duplicates. In order not to risk errors in the table, the duplicate reference numbers were left in and the reader is referred to the reference number of the earliest citation, but often a new page number is given.

SOURCES AND REFERENCES

Bartlett, J. C. 1967, Strolling Astronomer 20, 20-28.

Burley, J. M. and Middlehurst, B. M. 1966, Proc. Natl. Acad. Sci. 55, 1007.

Cameron, W. S. 1967, (Proc.) 5th Ann. Mtg. Working Group on Extraterrestrial Res., March 1-3, 1967, Huntsville, Alabama 47-56.

Cameron, W. S. 1968, Geol. Prob. in Lunar and Planetary Res. 25, 239-246.

Cameron, W. S. 1972, Icarus 16, 339-387.

Cameron, W. S. 1976, The Moon 14, 187-199.

Cameron, W. S. 1977, Phys. of Earth and Planetary Interiors 14, 194-216.

Cameron, W. S., and Gilheany, J. J. 1967, Icarus 7, 29-41.

Chapman, W. B. 1967, J. Geophysics Research 72, 6293-98.

Classen, J. 1969, Veroffenlichungen der Sternwarte Pulsnitz (Saschen) Nr. 5.

Classen, J. 1970, Veroffenlichungen der Sternwarte Pulsnitz (Saschen) Nr. 8.

Fitton, L. E. 1975, Brit. Astronom. Assoc. Circ. 10(4) 32-40.

Fitton, L. E. 1977, Brit. Astronom. Assoc. Circ. 12(7) 44-46.

Florenskiy, P. V. and Chernov, V. M. 1973, Astronom. Herald VII (1) 38-44.

Klado, T. N., 1965, NASA Technical Translation; NASA TT F-310.

Moore, P. A., 1971, J. British Astronom. Assoc. 81, (5) 365-390.

MB = Middlehurst, M. B. and Burley, J. M., 1966; X-641-66-178.

MBMW = Middlehurst, B. M., Burley, J. M., Moore, P. A. and Welther, B. L., 1968, NASA TR R-277.

Palm, A., 1967, Icarus 7 (2), 188-192.

LION = Smithsonian Institution Center for Short-lived Phenomena, Lunar International Observers Network reports for Apollo Missions 11 through 13, 1969-1970.

APPENDIX REFERENCES

1. Hess, W. 1911, Himmels-und Naturerscheinugen in Einblattdrucken des 15 bis 18 Jahrhunderts (Leipsig).
2. Harrison, J. C. Description of England, ed., Furnivall, 1876 (New Shakespeare Soc.).
3. Brit. Astron. Assoc. Circ. 2(8) 1967.
4. Mather, C. Phil. Trans., Roy. Soc. Lon. 29, 65, 1714.
5. Bode, J. E. 1792, Berliner Astron. Jahr., 112, 252.
6. See # 5.
7. Bianchini, F. 1686, Acta Eruditorum Leipsig.
8. deLouville, J. E. 1715, Mem. Hist. Roy. Acad. Sci. Paris, 96.
9. Hesperi et Phospheri Phaenomena, 1728 (Rome).
10. Phil. Trans. Roy. Soc. Lon. 41, 228, 1739.
11. Sirius 22 1889.
12. Beccaria, G. B., 1781, J. Phys. 17, 447.
13. Webb, T. Celestial Objects for Common Telescopes, Dover Pub., Inc., N.Y., p. 107.
14. deUlloa, G. 1779, Phil. Trans. Roy. Soc. Lon. 69, 105; also J. Phys. 15, 319, 1780.
15. Liais, E. 1865, L'Espace Celeste, 134-144 (Paris).
16. Phil. Trans. Roy. Soc. Lon. 78, 231, 1788.
17. Klado, T. N., NASA Tech. Trans. F-310, 4, 1965 (from Istoriko-astronomischeskiye Issledovaniya 6, 1, 1961).
18. Schröter, J. H. 1791, Selenotopographische Fragmente, (Gottingen).
19. See # 18.
20. Herschel, W. 1912, Collected Scientific Papers, ed. J. L. E. Dreyer, Lon. Roy. Astronom. Soc. also, Phil. Trans. Roy. Soc. Lon. 77, 229-232, 1787.
21. Lalande, J. 1792, L'Astronomie.
22. See #6, pp. 176, 313.
23. Klein, H. 1878, Sirius 11, 260; also Wochens fur Astron. 32, 364, 1878?
24. See # 5, p. 252; also # 25, also N A C II, 42, 50, 1788.
25. Houzeau, J. C. and Lancaster, A. 1964, Bibliog. General d'Astronomie, V. II, 2nd ed., ed. Dewhirst, London, Holland Press, Ltd.
26. See # 13, p. 113; also Pickering, W. H. 1902, Pop. Astron. 10, 419.
27. Moore, P. A. Survey of the Moon, Eyre and Spottiswoode, London, 1963.
28. See # 20.
29. Schröter, J. H. 1792, Schriften Gesells. Naturf. Freunde 10, 413 (Lilienthal).

30a. Phil. Trans. Roy. Soc. Lon. 26, 429, 1794; also 27, 435.

30b. Ogilvie, C. S. 1949, Pop. Astron. 57(5), 230 (May).

31. Caroché, N. S. 1799, Connaisance des Temps, 457.
32. Klein, H. 1879, Nature 20, 462.
33. Piazzi, G. 1800, Monantliche Correspondenz 2, 322.
34. Luthmer, 1824, Berliner Astron. Jahr., 242.
35. Ann. Reg., 689, 1821.

Appendix References (Cont'd.)

36. Mem. Roy. Astron. Soc. 1, 158-160, 1822.
37. Kater, H. 1821, Phil. Trans. Roy. Soc. Lon. 111, 130; also, Mem. Roy. Astron. Soc. 1, 159, 760, 1822.
38. Proctor, R. Myths and Marvels, p. 329.
39. Mem. Brit. Astron. Assoc. 7 (pt. 3, 4th rept), 59, 1899.
40. Gruithuisen, F. 1826, Archiv. Gesam. Naturl. 2, 293; also Astron. Nach. 4, 295, 1826.
41. Phil. Trans. Roy. Soc. Lon. 112, 237, 1822.
42. Struve, F. 1823, Astron. Nach. 1(9), 138.
43. Flaugergues, L. 1822, Corr. Astron. Geog. Hydrog. et Stat. 7, 235.
44. Göbel, D. 1826, Astron. Nach. 4(87), 295; also 4(82), 164, 1826.
45. Madsen, Kaj Ove 1962, Our Nearest Neighbor, UFO-NYT Jan. 7-9, 13 (in Danish).
46. Flammarion, C. 1884, Les Terres du Ciel, Marpon et Flammarion, Paris.
47. Klein, H. 1902, Pop. Astron. 10, 63.
48. Sirius 12, 20, 1879.
49. Ann. of Phil. 28, 338, 1825?
50. Selenog. J. 3, 60, 1880.
51. Emmett, R. B. 1826, Ann. Phil. 12, 8.
52. Capron, J. Rand, 1879, Aurorae, Their Characters and Spectra, p. 71 (London).
53. Astron. Reg. 20, 165, 1882; also, Goodacre, W. Mem. Brit. Astron. Assoc. 13, pt. 3, 71, 1906.
54. Smyth, C. P. 1836, Mon. Not. Roy. Astron. Soc. 3, 141.
55. See # 38.
56. Sci. Amer. Suppl. 7, 2629, 1836? or 1838?
57. Green, J. 1962, Lun. and Planet. Explor. Colloq. Proc. 3(1), 55.
58. Mem. Brit. Astron. Assoc. 3, 1895.
59. Wullerstorff, M. 1846, Annuaire du Bureau des Longitudes, 364.
60. Ringsdore, P. 1966, Brit. Astron. Assoc. Circ. 2(1), 2 (Dec).
61. Gerling, C. L. 1845, Astron. Nach. 22(526), 356.
62. Rankin, T. 1847? or 1848?, Brit. Astron. Assoc. Rept. 2, 18.
63. Hodgson, R. 1848, Mon. Not. Roy. Astron. Soc. 8, 55.
64. See # 63, p. 132.
65. See # 13, p. 110; also # 149, p. 42.
66. Hart, R. 1855, Mon. Not. Roy. Astron. Soc. 15, 89.
67. See # 15, p. 143-4.
68. Astron. Reg. 2, 264, 1864.
69. Birt, W. R. 1864, Astron. Reg. 2, 295.
70. Grover, C. 1866, Astron. Reg. 3, 253-5.
71. Eng. Mech. 35?(904), 450, 1882; also World of Science, Fri. July 21, 1882.
72. Denning, W. F. 1866?, Telescopic Work, 121; also Tempel, E. W. L. Astron. Nach. 69,(1655), 365-7, 1867.
73. Tempel, E. W. L. 1867, Astron. Nach. 69, 365.
74. See # 27.

75. Schmidt, J. 1867, Brit. Astron. Assoc. Rept. 22; also The Student 1, 261, 1867?
76. Hodgson, R. 1866, Astron. Reg. 3, 224.
77. The Student 1, 26, 1867?
78a. Flammarion, C. 1884, Les Terres du Ciel (Marpon et Flammarion, Paris) p. 430.
78b. Astron. Reg. 5, 220, 1867.
79. The Student 1, 261, 1868?
80. Brit. Astron. Assoc. Rept., 7, 1867.
81. Brit. Astron. Assoc. Rept., 8, 1868.
82. Williams, W. O. 1867, Astron. Reg. 4, 14.
83. See # 57.
84. Mon. Not. Roy. Astron. Soc. 29, 66, 1869.
85. Neison, E. The Moon, Longmans, Green and Co., London, 1876.
86. Mon. Not. Roy. Astron. Soc. 30, 26, 160, 1870.
87. Brit. Astron. Assoc. Rept., 88, 1871.
88. Birt, W. R. 1870, Astron. Reg. 7, 221.
89. Trouvelot, E. L. 1882, Trouvelot Astron. Drawings Manual, Scribner's Sons, N.Y., p. 49.
90. Wilkins, H. P. and Moore, P. A., The Moon, Faber and Faber, Ltd., London, 1955.
91. Eng. Mech., 1872?
92. Sirius 20, 45, 94, 1887.
93. Goodacre, W. 1906, Mem. Brit. Astron. Assoc. 13(3), 71.
94. See # 52.
95. Sirius 12, 20, 1879.
96. Nature 12, 495, 1875.
97. L'Astronomie 4, 212, 1885.
98. l'Opinione Nazionale, March 3, 1877.
99. Eng. Mech. 25, 89, 335, 432, 1882.
100. See # 99.
101. Astron. Reg. 17, 204, 1877?
102a. Sidereal Messenger 3, 121, 150, 1884; (b) J. Brit. Astron. Assoc. 19, 376, 1884?
103. Sirius 11, 260, 1878; also see # 52.
104. L'Astronomie 1878?
105. Selenog. J. 1, 7, 27, 1878.
106. See # 23.
107. See # 47, p. 65.
108. See # 95, p. 65; also Sci. Amer. 39, 385, 1878 (Dec 21).
109. Eng. Mech. 28, 725, 1885?
110. Gaudibert, C. 1880, Selenog. J. 3, 28.
111. L'Astronomie 4, 215, 1885; also Knowledge 7, 224, 1885?
112. See # 57; also see # 149.
113. Eng. Mech. 32, 494, 1889?
114. Sirius 14, 68, 1881.

115. Sci. Amer. 46, 49, 1882.
116. See # 47, p. 57.
117. Johnson, S. J. 1882, Astron. Reg. 20, 16.
118. Sirius 15, 167, 1882.
119. Williams, A. S. 1882, Selenog. J. 5, 36.
120. Goodacre, W. 1906, Mem. Brit. Astron. Assoc. 13 pt. 3, 71.
121. Proc. Liverpool Astron. Soc. 1, 1883 (April).
122. See # 71, p. 326.
123. Sirius 16, 279, 1883.
124. Davies, 1883, Proc. Liverpool Astron. Soc. 1, 31.
125. See # 123, p. 279.
126. L'Astronomie 3?, 149, 1884?
127. Parsehian, J. 1885? or 86?, L'Astronomie 4, 69.
128. Niesten, L. 1884, Bull. Brux. 8, 361.
129. Sirius 18, 20, 43, 1885.
130. L'Astronomie 6, 312, 1887.
131. Pop. Astron. 40, 316, 1932.
132. See # 92.
133. Sirius 36, 1903.
134. L'Astronomie 7, 75, 1888.
135a. Sirius 21, 249, 1888; (b) L'Astronomie 7, 502, 1888.
136. Nature 41, 183, 1890 (April).
137. L'Astronomie 8, 275, 1889.
138. Sirius 22, 1889.
139. Krueger, A. 1889, Astron. Nach. 122, 263.
140. Astron. Nach. 130(3097), 7, 1892.
141. Sirius 23, 1890.
142. Jackson, W. E. 1890-91, J. Brit. Astron. Assoc. 1, 463.
143. Pickering W. H., The Moon, Doubleday, Page and Co., N.Y., 1903, p. 40ff and Plate B; also, Harvard Ann. 32, and 51.
144. L'Astronomie 11, 33, 1892.
145. Sirius 25, 213, 1892.
146. L'Astronomie 13, 34, 1894.
147. Sirius 28, 92, 1895.
148. Mem. Brit. Astron. Assoc. 3, 1895?; also Pop. Astron. 3, 269, 1895?
149. Goodacre, W., The Moon, Pardy and Son, Bournemouth, England, 1931; also, Mem. Brit. Astron. Assoc. 7, 52, 1899.
150. Mem. Brit. Astron. Assoc. 7, 54, 1899.
151. Chevremont, 1898, Bull. Soc. Astron. France 12, 97.
152. Haas, W. 1942, J. Roy. Astron. Soc., Canada 36, 398.
153. Niesten, L. and Stuyvaert, E. 1898-9, Ciel et Terre 19, 567.
154. See # 150.
155. Brenna, V. 1963, The Moon, Gordon Press, N.Y., p. 40.
156. Bolton, S. 1901, Eng. Mech. 74, 276.
157. J. Brit. Astron. Assoc. 1902? (year of observation in doubt, also ref.).
158. See # 47, p. 419.

159a. Moore, P. A., Guide to the Moon, Eyre and Spottiswoode, London, 1953; (b) Bull. Soc. Astron. France 14, 1902.
160. Bull. Soc. Astron. France 17, 315, 1903.
161. Pickering, W. H. 1904, Astron. Nach. 166(3966), 91.
162. Sforza, G. de 1905, Bull. Soc. Astron. France 19, 462.
163. See # 57, p. 53.
164. Ward, J. T. 1906-7, J. Brit. Astron. Assoc. 17, 32.
165. Azevado, R. 1962, Lua, (Sao Paulo), Brazil.
166. Fauth, P. 1907, Mitt. Vereing. Freund. Astron. Kos. Phys. 17, 13.
167. J. Brit. Astron. Assoc. 19, 376, 1909.
168. Eng. Mech. (2305), 395, 1909.
169. J. Brit. Astron. Assoc. 21, 100, 1910.
170. Pop. Astron. 20, 399, 1912.
171. LeRoy, T. 1912, Bull. Soc. Astron. France 26, 248.
172. Valier, M. 1912, Astron. Nach. 191, 443.
173. Franks, W. S. His Observing Book.
174. Rawstron, G. O. 1937, Pop. Astron. 45, 291.
175. Jackson, G. 1913, Bull. Soc. Astron. France 27, 262.
176. Pickering, W. H. 1914, Astron. Nach. 196, 413.
177. Eng. Mech. 101, 47, 1915?
178. Houdard, G. 1917, Bull. Soc. Astron. France 30, 381.
179. Eng. Mech. 103, 10, 1915?
180. See # 178, p. 383.
181. Sci. Amer. 121, 181, 1919.
182. Ellison, W. F. A. 1917, Eng. Mech. 105, 10.
183. Bull. Soc. Astron. France 31, 439, 1917?
184. Eng. Mech. 109, 517, 1919?
185. Fock, A. 1920, Astron. Nach. 210, 293.
186. Eng. Mech. 110, 282, 1920?
187. Eng. Mech. 111, 142, 1920?
188. Eng. Mech. 112, 214, 1921?
189. See # 90, p. 235.
190. Eng. Mech. 115, 194, 218, 268, 278, 1924?
191. Wilkins, H. P., Our Moon, F. Muller, London, 1954.
192. Wilkins, H. P. His Observing Book.
193. Joulia, E. 1931, Bull. Soc. Astron. France 45, 149.
194. Pub. Astron. Soc. Pacific 48(9), 347, 1938. (ref. wrong; V.36=1938, obs. not in 36 nor 38.)
195. See # 131.
196. Douillet, E. 1933, Bull. Soc. Astron. France 47, 265.
197. See # 174.
198. J. Brit. Astron. Assoc. 48(2), 76-79, 1937.
199. Mem. Brit. Astron. Assoc. 36, 14, 1947.
200. Haas, W. Pop. Astron. 48, 200, 1940.
201. Firsoff, V. A., Strange World of the Moon, Basic Books, N.Y. 1959.
202. Proc. Lun. and Planet. Colloq. 1(4), 19, 1959.

203. Pop. Astron. 47, 108, 1939.
204. See # 27, p. 145-6, 153.
205. Wilkins, H. P. 1945, J. Brit. Astron. Assoc. 56, 12.
206. Mem. Brit. Astron. Assoc. 3, 17, 1948? (vol. wrong?)
207. J. Brit. Astron. Assoc. 58, 171, 1948.
208. Stroll. Astronomer 3(9), 10, 1949.
209. Stroll. Astronomer 5(1), 8, 1951.
210. Bartlett, J. C. 1967, Stroll. Astronomer 20(1-2), 24.
211. Stroll. Astronomer 4(7), 8, 1951.
212. Stroll. Astronomer 17(9), 215, 1963.
213. Sky and Telescope 14(6), 221, 1955 (April).
214. Stroll. Astronomer 10(3-4), 1956.
215. Capen, C. Sky and Telescope 14, 518, 1955 (drawing incl.).
216. Firsoff, V. A. Old Moon and the New, p. 182.
217. Sky and Telescope 15(1), 45, 1955 (Nov.).
218. Izv. Krymak Astrofiz. Obs. 16, 148-161, 1957; also, Kopal, Z. Nature of the Lunar Surface, eds., Hess, W. N., Menzel, D. H. and O'Keefe, J. A., Johns Hopkins Press, Baltimore, 1966, p. 176.
219. Palm, A. 1967, Icarus 7, 188-192.
220. Kozyrev, N. A. 1963, Nature 198(4884), 979-980 (June 8).
221. Alter, D. Pictorial Guide to the Moon, Crowell Co., N.Y., 1963, p. 147-9.
222. Haas, W. 1957, Stroll. Astronomer 11, 133.
223. Pub. Astron. Soc. Pacific 71, 233, 1959.
224. Stein, R. J. 1959, Sky and Telescope 18(4), 211.
225. Kozyrev, N. A. 1959, Sky and Telescope 18(4), 184-6 (Feb.).
226. Stroll. Astronomer 15(3-4), 64-6, 1961.
227. Lun. and Planet. Explor. Colloq. Proc. 1(4), 21, 1959 (Jan 12).
228. Mon. Not. Roy. Astron. Soc. 119, 421, 1959.
229. Greenacre, J., Aeronaut. Chart and Inform. Center Tech. Paper # 12.
230. Brit. Astron. Assoc. Circ. 6(5), 43-44, 1971 (June).
231. Brit. Astron. Assoc. Circ. 4(7), 69, 1969 (July).
232. Stardust 14, 9, 1959.
233. Nature 184(4685), 502, 1959 (Aug. 5). (Wilkins & Moore rept on 9/13/59 obs. in 8/15/59!).
234. See # 220.
235. See # 45.
236. Warner, B. 1960, J. Internat. Lun. Soc. 1, 144.
237. Miranova, Physics of the Moon and Planets, Israel translation--NASA pub.
238. Stroll. Astronomer 18(3-4), 45, 1964.
239. Middlehurst, B. M. 1967, Reviews of Geophysics 5(2), 185.
240. Bartlett, J. C. 1963, Stroll. Astronomer 17(1-2), 3-12.
241. Grainger, J. F. and Ring, J. 1963, Mon. Not. Roy. Astron. Soc. 125, 101.
242. Kopal, Z. Physics and Astronomy of the Moon, Academic Press, N.Y., 1962, p. 385-405.

243. Stroll. Astronomer 16(1-2), 41, 1962.
244. See # 252.
245. See # 220.
246. Classen, J. 1970, Gase auf der Mondoberfläche, p. 9 or Veroffentlichungen der Sternwarte Pulsnitz (Saschen) No. 8.
247. Stroll. Astronomer 18(1-2), 6, 1964.
248. Spinrad, H. 1964, Icarus 3, 500.
249. Kopal, Z. 1965, Sci. Amer., 28-37, (May).
250. Brit. Astron. Assoc. Circ. 2(3), 3, 1967.
251. Greenacre J. and Barr, E. 1963, Sky and Telescope 26(6), 316 (Dec).
252. Kopal, Z. and Rackham, T. 1964, Sky and Telescope 27, 140-1, (March).
253. Blizard, J. 1967, Amer. Geophys. U. paper, April 20, 1967.
254. Green, J. 1965, Geol. Prob. in Lun. Res., N.Y. Acad. Sci. 123.
255. Sky and Telescope 27, 1964 (Jan. ? or Feb. ?).
256. Haas, W. 1964? Stroll. Astronomer 17(3-4), 213.
257. Sky and Telescope 27(6), 351, 1964 (Junę).
258. Sky and Telescope 27(3), 142, 1964.
259. Cameron, W. S. and Gilheany, J. J. 1967, Icarus 7, 29-41.
260. Pub. Astron. Soc. Pacific 77(457), 237, 1965.
261. Sky and Telescope 30(3), 184, 1965 (Sep).
262. Revista Astron. 36, 159, 1965.
263. Classen, J. 1970, Veroffentlichungen der Sternwarte Pulsnitz (Saschen) Nr. 8, 8.
264. McCord, T. 1967, J. Geophys. Res. 72(8), 2087 (Apr. 15).
265. Brit. Astron. Assoc. Circ. 4, 1966.
266. Lipskii, Yu. N., Pospergelis, M. M. 1967, Soviet Astron. J. 11(2), 324-6 (Sep., Oct.).
267. Brit. Astron. Assoc. Circ. 1(6), 4, 1966.
268. Brit. Astron. Assoc. Circ. 1(7), 1966; also 1(12), 4, 1966.
269. Brit. Astron. Assoc. Circ. 1(8), 1966; also 1(12), 4, 1966.
270. Stroll. Astronomer 19(11-12), 194-6 1966 (Nov-Dec).
271. Stroll. Astronomer 22(9-10), 160-1, 1970 (Nov.).
272. Brit. Astron. Assoc. Circ. 1(12), 4, 1966 (Dec.).
273. Brit. Astron. Assoc. Circ. 5(11), 104, 1970 (Nov).
274. Brit. Astron. Assoc. Circ. 1(10), 6, 1966 (Oct).
275. Sky and Telescope 33(1), 27, 1967 (Jan).
276. Brit. Astron. Assoc. Circ. 2(12), 1967 (Dec).
277. See # 272.
278. Brit. Astron. Assoc. Circ. 2(1), 3, 1967 (Jan).
279. Brit. Astron. Assoc. Circ. 2(5), 8, 1967 (May).
280. Brit. Astron. Assoc. Circ. 2(3), 3, 1967 (March).
281. Brit. Astron. Assoc. Circ. 2(4), 9, 1967 (April).
282. Tass News release, Jan. 2, 1967.
283. Stroll. Astronomer 21(9-10), 162, 1969 (July).
284. Smithsonian Institution Lunar Internat. Observer Network Rept., May 1970.

285. Brit. Astron. Assoc. Circ. 2(6), 6, 1967 (June).
286. Stroll. Astronomer 20(5-6), 108, 1967.
287. Brit. Astron. Assoc. Circ. 2(7), 2, 1967 (July).
288. Classen, J. 1969, Veranderungen auf dem Mond, p. 15; Veroffentlichungen der Sternwarte Pulsnitz (Saschen) Nr. 5.
289. Brit. Astron. Assoc. Circ. 2(8), 1967 (Aug.).
290. Brit. Astron. Assoc. Circ. 2, 1967.
291. Brit. Astron. Assoc. Circ. 2(10), 6, 1967.
292. Brit. Astron. Assoc. Circ. 2(12), 6, 1967.
293. See # 288.
294. Brit. Astron. Assoc. Circ. 2(11), 8, 1967.
295. Brit. Astron. Assoc. Circ. 3(1), 4, 1968 (Jan.).
296. Stroll. Astronomer 20(11-12), 1968.
297. Brit. Astron. Assoc. Circ. 3(6), 54, 1968 (June).
298. Brit. Astron. Assoc. Circ. 3(5), 42, 1968 (May).
299. Brit. Astron. Assoc. Circ. 3(6), 52, 1968 (June).
300. Moore, P. A. 1971, J. Brit. Astron. Assoc. 81(5), 372. (Moore's extension catalog); also Brit. Astron. Assoc. Circ. 2(13), 5, 1967 (Dec.).
301. J. Roy. Astron. Soc. Canada 63(4), 203, 1969 (Aug.).
302. Stroll. Astronomer 21(9-10), 162, 1969 (July).
303. Brit. Astron. Assoc. Circ. 3(12), 117, 1968 (Dec.).
304. Brit. Astron. Assoc. Circ. 5(11), 107, 1970 (Nov.).
305. Middlehurst, B. M. 1969, Smith. Inst. Cen. Short-lived Phen. Rept., April, 1969.
306. Brit. Astron. Assoc. Circ. 4(1), 2, 1969 (Jan.).
307. Brit. Astron. Assoc. Circ. 4(2), 19, 1969 (Feb.).
308. Brit. Astron. Assoc. Circ. 4(3), 28, 1969 (March).
309. Brit. Astron. Assoc. Circ. 4(4), 39, 1969 (April).
310. Brit. Astron. Assoc. Circ. 4(5), 48, 1969 (May).
311. Brit. Astron. Assoc. Circ. 4(6), 55, 1969 (June).
312. Brit. Astron. Assoc. Circ. 4(7), 69, 1969 (July).
313. Brit. Astron. Assoc. Circ. 4(8), 74, 1969 (Aug.).
314. Smithson. Inst. Center for Short-lived Phen. Rept. Aug. 1969.
315. S. and T. Alert--Item # 724, Sov. Sci. Discoveries.
316. Brit. Astron. Assoc. Circ. 4(9), 84, 1969 (Sep).
317. Astronomicheskii Vestnik 6, 1972 (Jan-Mar) translated by Nick Karlow.
318. Brit. Astron. Assoc. Circ. 5(11), 104, 1970 (Nov).
319. Lun. Internat. Obs. Network Rept., Apollo 12 mission, Dec., 1969.
320. Brit. Astron. Assoc. Circ. 5(1), 4, 1970 (Jan).
321. Brit. Astron. Assoc. Circ. 5(2), 17, 1970 (Feb.)
322. Brit. Astron. Assoc. Circ. 5(12), 115, 1969 (Dec).
323. Brit. Astron. Assoc. Circ. 8(7), 57, 1973 (July); also, Mem. Brit. Astron. Assoc. 36, 3, 1950.
324. Phil. Trans. 40, 181, 1737.
325. Chron. Rampona, @ 1425; also, Brit. Astron. Assoc. Circ. 8(1), 8, 1973 (Jan).

326. Newton, R. R. Medieval Chron. and Rotation of Earth, Johns Hopkins Press, Baltimore, p. 690; also Brit. Astron. Assoc. Circ. 8(1), 8, 1973 (Jan).
327. Sekiguchi, N. 1971, The Moon 2(4), 433-35.
328. Lun. Internat. Obs. Network Rept., Apollo 13 mission, April 1970.
329. Brit. Astron. Assoc. Circ. 5(7), 69, 1970 (July).
330. Celis, R. C. 1970, Ann. del Museo de Historia Natural No. 3, 146-160.
331. Brit. Astron. Assoc. Circ. 5(3), 23, 1970 (March).
332. Pop. Astron. 57, 354, 1949 (Aug).
333. Obs. Astron. do Colegio Estadual de Parana Circ. 2(10), 1973 (Oct).
334. Brit. Astron. Assoc. Circ. 8(2), 15, 1973 (Feb).
335. Brit. Astron. Assoc. Circ. 5(8), 70, 1970 (Aug).
336. See # 327.
337. Brit. Astron. Assoc. Circ. 5(10), 92, 1970 (Oct).
338. Brit. Astron. Assoc. Circ. 5(11), 107, 1970 (Nov).
339. Brit. Astron. Assoc. Circ. 6(5), 43-4, 1971 (June).
340. Brit. Astron. Assoc. Circ. 6(1), 2, 1971 (Jan).
341. Brit. Astron. Assoc. Circ. 6(3), 26, 1971 (April).
342. Brit. Astron. Assoc. Circ. 6(1), 1, 1971 (Jan).
343. Brit. Astron. Assoc. Circ. 6(2), 12, 1971 (March).
344. Brit. Astron. Assoc. Circ. 6(3), 22, 1971 (April).
345. Brit. Astron. Assoc. Circ. 6(5), 42, 1971 (June).
346. Brit. Astron. Assoc. Circ. 6(8), 70, 1971 (Sep).
347. Brit. Astron. Assoc. Circ. 6(10), 1971 (Nov).
348. Brit. Astron. Assoc. Circ. 6(11), 88, 1971 (Dec).
349. J. Brit. Astron. Assoc. 83(1), 36, 1972 (Dec).
350. Brit. Astron. Assoc. Circ. 7(1), 3, 1972 (Jan).
351. Brit. Astron. Assoc. Circ. 7(3), 20, 1972 (March).
352. Brit. Astron. Assoc. Circ. 7(5), 38, 1972 (May).
353. Apollo 16 Prelim. Sci. Rept., p. 5-4, NASA SP-315, 1972.
354. Brit. Astron. Assoc. Circ. 7(7), 58, 1972 (July).
355. Brit. Astron. Assoc. Circ. 7(8), 70, 1972 (Aug).
356. Brit. Astron. Assoc. Circ. 7(9-10), 79, 1972 (Sep).
357. Stroll. Astronomer 24(5-6), 102-3, 1973 (June).
358. Brit. Astron. Assoc. Circ. 8(2), 12, 1973 (Feb).
359. Brit. Astron. Assoc. Circ. 9(1-2), 9, 1974 (Jan & Feb).
360. J. Brit. Astron. Assoc. 84, 176-183, 1974 (April).
361. Brit. Astron. Assoc. Circ. 8(4), 31, 1973 (April).
362. Brit. Astron. Assoc. Circ. 8(6), 45, 1973 (June).
363. Cameron, W. S. 1974, Stroll. Astronomer 25(1-2), 1-14; also NASA X-601-74-86.
364. Brit. Astron. Assoc. 8(11), 84, 1973 (Nov).
365. Brit. Astron. Assoc. 9(1&2), 2, 1974 (Jan & Feb).
366. Brit. Astron. Assoc. Circ. 8(12), 96, 1973 (Dec).
367. Brit. Astron. Assoc. Circ. 9(4), 37, 1974 (April).
368. Brit. Astron. Assoc. Circ. 9(11), 104, 1974 (Dec).

369. Brit. Astron. Assoc. Circ. 10(4), 37-40, 1975 (April).
370. Brit. Astron. Assoc. Circ. 10(5), 45, 1975 (May).
371. Foulkes, 1895, Mem. Brit. Astron. Assoc. 3, (3rd rept., Lunar sect.).
372. Brit. Astron. Assoc. Circ. 10(7), 69, 1975 (July).
373. Elger, T. G. 1895, The Moon, George Philip and Son, London, p. 102.
374. See # 149, p. 327.
375. Moore, P. A. and Cattermole, P. Craters of the Moon, Lutterworth Press, London, 1967, p. 80.
376. Fauth, P. The Moon, A. Owen and Co., London, 1910, p. 140.
377. Selenotopographisce Fragmente, 1791.
378. Schmidt, J. 1879, Vierteljahrschrift fur Astronomie 14, 265.
379. Fauth, P. 1879, Astron. Nach. 151, 219.
380. Krebs, 1909, Astron. Nach. 181, 45.
381. See # 103.
382. See # 201, p. 90.
383. Mem. Brit. Astron. Assoc. 20, 7th rept., 1916.
384. Brit. Astron. Assoc. Circ. 2(5), 1967.
385. Brit. Astron. Assoc. Circ. 10(10), 91, 1975 (Oct).
386. Brit. Astron. Assoc. Circ. 10(9), 82, 1975 (Sep).
387. Florenskiy, P. V. and Chernov, V. M. 1973, Astron. Herald VII(1), 38-44.
388. Brit. Astron. Assoc. Circ. 11(1), 10, 1976 (Jan).
389. Hartung, J. B. 1976, 7th Lun. Sci. Conf., March 15-19, 1976, by Xraus, Reprint, Ltd., p. 348.
390. Wildey, R. and Pohn, H. A. 1964, Astron. J. 69, 619.
391. Brit. Astron. Assoc. Circ. 11(2), 19, 1976 (Feb).
392. Hynek, J. A., Dunlap, J. R. and Hendry, E. M. 1976, Corralitos Obs. Prog. for Detection of LTP, NASA CR-147888.
393. Proc. Lon. Roy. Soc. 2, 167, 1822?; also, Phil. Trans. 84, 429, 1822?
394. Pop. Sci. 34, 158, 1788?
395. Intelligent Observer 11, 58, 1866?
396. Observatory 2, 374, 1879?
397. Eng. Mech. 25, 89, 1879?
398. See # 87.
399. Brit. Astron. Assoc. Rept., 80, 1871.
400. J. Brit. Astron. Assoc. 19, 376, 1880?
401. Reed, G., Howell, F. J., and Clark, T. A. 1974, Nature 247, 447, (Feb. 15).
402. J. Brit. Astron. Assoc. 86(5), 410, 1976 (Aug).
403. Res. Group Planet. and Geophys. Volcan., Rept. # 5, 7, 1976 (March-April).
404. Brit. Astron. Assoc. Circ. 11(6), 37, 1976 (July).
405. Brit. Astron. Assoc. Circ. 11(8), 54, 1976 (Sep).
406. Brit. Astron. Assoc. Circ. 12(2), 15, 1977 (Feb).
407. Brit. Astron. Assoc. Circ. 12(3), 26, 1977 (March).

Appendix References (Concluded)

408. Brit. Astron. Assoc. Circ. 12(5), 30, 1977 (May).
409. Bispham, K. 1968, J. Brit. Astron. Assoc. 78(5), 381; also, Schröter, J. H. 1791, Selenog. Frag. I(481), 594. (# 18).
410. See # 375.
411. Scarfe, C. D. 1965, Mon. Not. Roy. Ast. Soc. 130, 19.
412. J. Brit. Astron. Assoc. 87(3), 301, 1977.
413. Evans, R. E., El-Baz, F. 1973, Apollo 17 Prelim. Sci. Rept., NASA SP-330, p. 28-29.
414. Freeman, J. W., Hills, H. K., Lindeman, R. A., and Vondrak, R. R. 1973, The Moon 8, 115-128.
415. Sky and Telescope 20(5), 265, 1960 (Nov).

LUNAR TRANSIENT PHENOMENA

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt	Phen. Type
	m d y	h m		λ , β		m d h	m d h	πp πa π		d	°	°	m d h				Ap. K Pw					
					500 A.D.																	
1	11/10/57	1800?			Light on moon. (year uncertain accord. to source.)					3.5:		42:	-11.7: N 22 10	A?		Europe?	naked eye		Bo	372	4'	B
					600 A.D.																	
2	4/15/75	1800:			Unecl. full moon was red. "rainbow in sky scared everybody" (seen thru an aurora?)					14.4:		90	0.0 Ap 15 18	A		Europe?	naked eye		Bo	372	1	R
					1000 A.D.																	
3	/ /58 or 86?				A bright light in circle of full moon.					15:		90	0.0				naked eye			325	3*	B
4	8/ 6/96	2300			Bright light dur. ecl. (date given as 8th but FM on 6th accord. to Goldstine's. "New & Full Moons".)					15.5		90	0.0 Au 06 23				naked eye			326	3*	B
					1100 A.D.																	
5	6/18/78	2100?	Cusps & body	79E, 90N	5 obs. saw upper horn split in 2 then a flaming torch sprang up. Body of moon throbbed & writhed, 12X. Then it took on a blackish hue. (Hartung thinks due to impact; could be atm. aberr., near horizon.)				mins.	1.2		281 0R	-13.0 Jy 01 21		5	London?, England	naked eye		H	389	5*	B, D
					1500 A.D.																	
6	11/26/40	0500	between M. Serenit. & M. Imbrium	5:E, 30:N	Woodcut shows star between eyes of man in moon. Star-like appearance on dark side.					27.2		240 +65:S	+11.7 N 14 13			Worms, Germany	naked eye		M	1	5*	B
7	3/ 5/87	1900?	Alphonsus?	4:W, 13:S	Star seen in body of moon. "Strode directly between pts. of her horns".					6.4:		348: -16:R	-8.8 Mr 14 15			England?	naked eye		MB	2	3*	B
					1600 A.D.																	
8	/ /50		Aristarchus	47W, 23N	"Red hill" (called it Mons Porphyrie)										Hevelius	Greece?	6 ft. sextant?			3	3*	R
9	11/26/68	0200?			Bright star-like point on dark side.					21.7:		181	+7.5: N 18 15		several	Boston, Massachu.	naked eye		M	4	5*	B
10	10/21/71		Pitatus	14W, 30S															MBMW	5	1	
11	11/12/71		"	"	Small whitish cloud.										Cassini	Italy?			"	"	3*	B, G
12	2/ 3/72		M. Crisium	55:E, 15:N	Nebulous appearance.										"	"			"	"	1	G
13	10/18/73		Pitatus	14W, 30S	White spot.										"	"			"	2	3	B
14	12/10/85	2200-2300:	Plato	9W, 51N	Red streak on floor during eclipse.				>1h	14.6		90 81R	0.0 D 10 22		Bianchini	Italy?			M	7	1	R
					1700 A.D.																	
15	5/12/06	2228			3 sparkling spots on moon during solar eclipse.				min.	0.0		270	-15: My 26:						MBMW	6	3*	B
16	5/ 3/15	0930			"Lightning" on face of moon deLouville explained it as storms. (Bailey's beads?)				secs?	0.0		270	-15.1 My 18 12		deLouville Halley	France? England?			M	8	2	B
17	8/16/25	2000?	Plato	9W, 51N	Track of ruddy light like a beam, crossing middle of obscured area.					6.5:		348: -21:R	-7.9: Au 24 18		Bianchini	Italy?			MB	9	3*	R
18	3/ 1/37		M. Crisium?	70:E, 15:N	Just prior to complete annulus (solar ecl.) a remarkable speck of pale light appeared in mid moon that was not yet come upon the sun.				secs?	0.0		270 -20:R	-15: Mr 16:		McLaurin	Edinburgh, Scotland	naked eye?			324	3*	B
19	8/ 4/38	1631			Appearance like lightning on moon during partial solar eclipse.				min?	0.0		270	-15: Au 19?		friend of Wiedler	England?	naked eye?		MBMW	10	1	B
20	4/22/51	1900?	Plato	9W, 51N	Yellow streak of light across floor while crater was in darkness.					7?		0?	-8? Ap 30?		Short, Harris, Stephens	England?			"	11	5*	R

No.	Date m d y	UT Time h m	Feature	Selenographic Coordinates λ , β	Phenomena Description	Perigee Dates m d h	Apogee Date m d h	Horizontal Parallax πp πa π	Duration	Age d	φ	Colon. Term. Dist. °	Days fr. FM & mr. FM d m d h	Solar Kp ΣKp	Observer	Location	Telescope Ap K Pz	Seeing	Inform. Source	App. Ref.	Wt	Phen. Type
							700 A.D.										"					
21	10/11/72	1700:-1800:	Copernicus	20W, 9N	Bright spot, 4th mag. on ecl. moon, & glimmering specks. (mid-ecl. at 1713 UT.)				hrs.?	15.2		90 70R	0.0 O 11 17		nephew, neice of Beccaria	Turin, Italy	Dolland R .5m FL		M	12	4*	B
22	7/25/75?	2100?-2300?	M. Crisium	55E, 15:N	4 bright spots intersected term. on dayside only. 2 identified. Reciprocating motion of term. in 5 or 6 min. between pairs-touching in turn. The term. in M. Fecund. was still. Similar phen. seen on Jup. satellite once. (Date 1774 in MBMW wrong?).				2h	3?		325: 20:R	-12: Au 06?		Eysenhardt pupil of Lambert	France?	4 R	Clear		13	2	B, G
23	6/24/78	1539			Dur. solar ecl. bright spot nr. lunar limb almost as bright as sun. (Bailey's beads? or prominence?)	Je 23	Je 08	61 17 54 06 61 13N 61 04M	1.5m	0.0	.05 .04	270 0? or 180?	-15: Jy 08		deUlloa	Italy?			MB	14	0	B
24	3/18/83 or 9/10/83	2130 (mid-ecl.)			Moving glows around middle of disk dur. lunar eclipse.	F 21: Mr 21:	Mr 08:			15:	.86: .88:	90 90:R	0.0 Mr 1822 or S 10		Messier	France?			MBMW	15	1	B
25	3/ /83		near Aristarchus	47:W, 23:N	Bright points seen during occultation.	"	"						Mr 1822		Herschel	Windsor, England	9 L FL=10'		M	20	3*	B
26	5/ 4/83	2000?	"	"	Red, 4th mag. brightness, less than 3 arcsec diameter.	Ap 19 My 17	My 05	6024 5417N 6109 54 12 54 14M	min?	4	.46: .54:	320: -97:R	-11.0: My 1425		Herschel, Mrs. Lind	"	"			16	5*	B
27	5/13/83	2200?	"	"	2 small conical mts. nr. last (My 4th) eruption, close to a 3rd one that he had seen before, but not these 2. Not on any map.	"	"	" "	"	13.5:	.86	75: 30:R	-1.0: My 1425		Herschel	"	"		KJ	17	4*	B
28	/ /84		"	"	Nebulous spot of light.										Schroter	Lilienthal, Germany			MB	18	3	B, G
29	/ /85		"	"	" " "										"	"			M		3	B, G
30	12/24/86	1800?	"	"	Extraordinarily bright (in dark part.)	D 03: Ja 01	D 17	56 14N 60 48 54 07 56 30M		4.0:	.76: .78:	320: -97:R	-11.5: D 06 05		"	"			MB	18	4*	B
31	3/ /87				3 bright spots on dark part.	Mr 21: Ap 19	Ap 07	60 54 54 16							Herschel	Windsor, England	9?L		MBMW	18	4*	B
32	4/19/87	1036(ST) 2234(UT)	Aristarchus, Menelaus? Manilius?	47W, 23N 16E, 16N 8E, 14N	3 volcanoes, brightest 3'57"3 from N. limb, other 2 farther toward center (Menelaus & Manilius accord. to Webb). Light > Mechain comet nucl. Not seen previous lunation.	Ap 19 My 17	My 04	60 54 60 55N 61 25 60 53M		2.5:	.00 .02	300: -107:R - 44:R - 51:R	-12.5: My 0204	A	"	"	"			20	4*	B, R
33	4/20/87	1002(ST) 2200(UT)	"	"	Brightest volcano even brighter, at least 3mi. diameter. As a coal glowing in daylight. 2 others near center.	"	"	" 60 53M		3.5:	.04 .04	312: - 95:R -32:R -39:R	-11.5: My 0204	A+1	"	"	"			20	4*	B, R
34	5/19-/87 20	2100?-0030?	Aristarchus	47W, 23N		My 17 Je 15?	Je 01	61 25 54 07 61 02 60 46	3h?	2.5:	.10 .11:	300: -107:R	-12.2: Je 01 02		vonBruhl	Germany?			M	18	1	
35	5/22/87	2100?	Helicon	23W, 40N		"	"	" "		4.5:	.18:	325: -55:R	- 9.1: Je 01 02		Villeneuve	France?			MBMW	21	1	
36	10/ 7/87	0300?	Aristarchus	47W, 23N		O 01 O 28:	O 16	59 36 58 14 54 20 58 01		24:	.17: .22:	205: 20:S	+ 9: S 28:		Schroter	Lilienthal, Germany			M	18	1	
37	12/ /87				Luminous point on dark side										d'Angos	Malta, UK			"	"	3*	B
38	1/11/88	1800?	near Plato	9:W, 51:N	Bright point on dark part.	D 24: Ja 21	Ja 07	61 24 54 04 54 57		4.6:	.64 .64	315: -55:R	-10.4: Ja 22 13		several	Manheim, Germany			"	"	5*	B
39	3/9-/88 10	2000?-0000?			" " " " "	F 18: Mr 17-18	Mr 02	59 48 54 17 57 00	hrs?	3.5:	.73 .71:	310:	-10: Mr 20:		Schroter	Lilienthal, Germany			"	"	3*	B
40	3/13/88	2000?	Riccioli	74W, 5S	Bright spot.	"	"	" "		7.9:	.86 .82	0: -75:R	- 7: Mr 20:		"	"			"	"	3*	B
41	3/13/88	2000?	Helicon	23W, 40N	Lunar volcano, like 6th mag. star. (in dark).	"	"	" "		"	"	0:	"		Novet				MBMW	"	3*	B
42	4/ 9/88	2000?	near Aristarchus	47W, 23:N	Glimmering pt. became nebulous in Herschelian 'scope at 161X--changes. Brighter than Aristarchus	Mr 17-18 Ap 12	Mr 29-30	59 48 59 26 54 23 58 59 59 08	1h	3.8:	.91: .89:	-23:R 320: -87:R	-10: Ap 19		Schroter, Bode	France? Lilienthal, Germany			M	22	5*	B, G
43	4/ 9-/88 11	2000? 2100?	Aristarchus Plato	47W, 23N 9W, 51N	Bright pt. 26" N. of Aris. rim. Resembled one nr. Plato but less conspicuous. (Aris. obs. confirmation of Sch. & Bode?)	"	"	" " 59 08	2d?	3.8: 4.8: 5.8:	.91: .93: .96:	320- 345: -87:R -49:R	-10: - 9: - 8: Ap 19		"	"				22	5*	B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Dates of Perigee	Date of Apogee	Horizontal Parallax	Duration	Age	φ	Colon. Term Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	See-ing	Inform. Source	App. Ref.	Wt	Phen. Type
	m d y	h m		λ, φ		m d h	m d h	π_p π_a π_T		d	°	°	m d h	$K_\odot$ $2K_\odot$			Ap K Pu					
								1700 A.D.														
44	4/19/88	2000?	near Aristarchus	47:W, 23:N	Small area very brilliant & other bright spots.	Ap 12 My 09:	Ap 26:			15:	.26	90: 43:R	0: Ap 19		Schroter	Lilienthal, Germany	L?		p.c. to M		4*	B
45	5/ 1/88	0100?	"	"	Small depression, 1, has a strong glimmer.	"	"			24:	.70	204: 17:S	+9: Ap 19		"?	"?	"?				4*	B,G
46	5/ 8/88	2000?			Bright spots. (confirmed by Bode & Schroter? see #47).	"	"			6:	.96: .98:	350:	-9: My 17		Mechain	France?			MBMW	21	5*	B
47	5/ 8-/88 9	2000? 0100?			Bright spots. (confirmation of Mechain? see #46)	"	"			"	.98: .00:	"	-9: My 17		Schroter, Bode	Lilienthal, Germany	L?, R		"	22	5*	B
48	5/17/88	2100	"	"	Small depression, 1, was a bright spot, (similar to #45)	My 09:	My 24:			15:	.30:	90: 43:R	0: My 17		Schroter	"	L2IK		M		4*	B
49	8/27/88	0000?				Au 01: Au 29	Au 14	60 16 61 05 54 07 60 33		19:	.92: .93:	115:	+4: Au 23:		"	"			"	18	1	
50	9/26/88? 89?	0425? 0425 0430	Aristarchus Plato N.M. Crisium	47W, 23N 5:W, 47:N 60:E, 24N	Bright pt. 26" N. of Aristarchus. 1'18.5" SE of Plato was a whitish bright spot shining somewhat hazily, 4-5" diam. 5th mag. never seen again. Became conspicuous at times then disappeared. Nothing similar in earthshine. Other unaffected. Small nebulous bright spot in N. edge of M. Crisium. (date 1789? as Webb has as phase is better for desc., MBMW has 1788 (see # 62).	Au 29 S 26	S 10-11	61 05 60 19 60 17 54 13 60 19	1/2h 1/4h	16:	.00 .00	110 117S 80S 10S	+2: S 24:		"	"			"	22 p176	3*	B,G
51	12/ 2/88	0435	Aristarchus	47W, 23N	Extraordinarily bright, like a star.	D 15:	D 02:			4.5	.50	306 -83R	-9.5: D 1106		"	"			MBMW	18	4*	B
52	12/11/88	2200?	Plato	9W, 51N	Bright area like a thin white cloud.	"	"			15:	.14:	96: 93:S	+0.5: D 1109		"	"			"	23	4*	B,G
53	/ /88		Aristarchus	47W, 23N	Brilliant spots.										Bode	Germany			"	24	4*	B
54	/ /88				Saw a shadow in lunar Alps. 1st saw a light, but when region was illum. saw a round shadow where light had been.										Schroter	Lilienthal, Germany			F p225	394 3	2	B,D
55	1/10/89	0000?			Lunar volcano. (nr. FM so must have been bright.)	D 15: Ja 12	D 30	60 37 61 21 54 09 60 54		15:	.88 .93:	90:	0: Ja 09:		Seyffer	Germany			M	25	4*	B
56	3/29-/89 31	2000? 2100?	Aristarchus	47W, 23N	Nebulous bright area.	Mr 10: Ap 07	Mr 22-23	60 39 54 05	2d?	2.7:- 4.7:	68-75	302-305 -105:R	-12--10 Ap 10:		Schroter	Lilienthal, Germany			MBMW	18	4*	B,G
57	3/30/89	2000?	Grimaldi, Riccioli	65W, 45 67:W, 45	2 flickering spots on E. edge of Grimaldi & nr. Riccioli. On dark part of moon, a bright spot.	"	"	" "		3.7:	.70: .71:	305: -120:R	-11: Ap 10		"	"			MB		4*	B,G
58	3/ /89		near Aristarchus	47:W, 23:N	Brilliant luminous reddish spots.	"	"	" "							Bode	Germany			"		4*	B,R
59	4/ /89		"	"	Brilliant luminous pts. in dark part.										"	"			"		4*	B
60	5/ /89		"	"	Same as last 2 lunations--luminous spots.										"	"			"		4*	B
61	7/30/89	2100?	Plato	9W, 51N	Soon after sunrise saw a kind of fermentation on the floor which clearly resembled a kind of twilight. (due to some aberration unknown to observer?).					8:		11: 2:R	-7: Au 06:		Schroter	Lilienthal, Germany	L?		MBMW		2*	G
62	9/26/89	0430 (LT) 0330 (UT)	Mt. Blanc in Alps	0 , 4	Close beneath Mt. Blanc at W. foot, in dark, saw a small speck of light, 5th mag. Its round shadow was sometimes black, sometimes gray. (Same obs. as #50? see remarks).					7:		355 -14:R	-8: O 04:		Schroter	Lilienthal, Germany				26	4*	B,G
62a	10/15/89	0600 (0500 LT)	Mare Imbrium	20:W, 30:N	2 bursts of light--single, separate small sparks. Travelled to N. part of mare--separated in time by 2s, lasting total of 4s. No trace later.					27:		220: 20:S	+12: O 03?		"	"				409. 18 p594	3*	B
63	10/ /89		Cleomedes	56E, 27N	Small crater tho't to be formed in large walled plain. Mists reported in area. (near sunrise?).										"	"			P	27	1	B,G
64	/ /89				Luminous pt. on moon										Rochon?	LaMuette Obs.? France?			M		3*	B
65	1/17/90	1800?	Aristarchus vicinity	47:W, 23:N	Small hazy spot of light.	Ja 04-05 F 01	Ja 20	59 44 55 05 60 40 54 17 54 53		3:	.39: .43:	305: -102:R	-12: Ja 29		Schroter	Lilienthal, Germany			"		4*	B,G
66	2/15-/90 18	1800?	"	"	" " " " "	F 01 Mr01:	F 17	60 40 54 24 54 10 54 18	3d?	2:- 5:	.46 .61:	290: -113:R	-13: F 28:		"	"			"		4*	B,G
67	3/ 3/90	2200?	Aristarchus	47W, 23N	Herschel's 1787 luminous pt. observed in same place.	Mr 01: Mr 30	Mr 16	61 36 54 04		18:	.93:	126: 101:S			Wilkins	England?			"		3*	B
68	3/19/90	2100?	Aristarchus region	47:W, 23:N	Small hazy spot of light.	"	"	" " 54 23 54 32		3.5:	.57: .61:	310: -97:R	-11: Mr 30		Schroter	Lilienthal, Germany					4*	B,G
69	10/22-/90 23	2300-0200:			During ecl. (mid-ecl. at 0041) saw at least 150 small, round	O 10 N 07:	O 25	60 56 54 42 54 08 54 34	1h?	14.7	.42 .45	90	0.0 O 23?		Herschel	Windsor England	9 L?			20	4*	B,R

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Dates of Perigee	Date of Apogee	Horizontal Parallax	Duration	Age	φ	Colon. Term Dist	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	See-ing	Inform. Source	App. Ref.	Wt.	Phen. Type
	m d y	h m		λ ρ		m d h	m d h	☾p ☾a ☿		d	☿	°	m d h	K_p ΣK_p			Ap K Pw					
								1700 A.D.														
70	2/24/92		Cusps		Trace of twilight. Cusps showed signs of twilight. (sketch in ref. 13, pp96, 97).										Schroter	Lilienthal, Germany	L161X 7'fl.			13	4*	B, G
71	/ /92		Aristarchus	47W, 23N	Many occasions, special appearance.										Bode	Germany			MB	29	4*	B?
72	/ /92				Dark side, brilliant spots.										Schroter	Lilienthal, Germany			MBMW	"	4*	B
73	3/ 7/94	2000	Aristarchus	"	Appearance of light like a star in dark part. (indep., widely-separated obs. ? see # 74).	Mr 01 Mr 29:	Mr15-16	61 33 58 05 54 06 57 37		5	.25 .25	320 -87R	-10 Mr 17		Stretton, Wilkins	England			MB	30 a,b	5*	B
74	3/ 7/94	2000?	"	"	Star-like pt. in dark part. (confirm. of Stretton & Wilkins see # 73?).	"	"	" " "	1/4h	"	"	"	"		Maskelyne?	England			M	30 a	5*	B
75	/ /94		"?	"?	Some observers claimed to see the lunar volcano with the naked eye (Aristarchus?)																5*	B
76	3/ 2/97	1900?	near Prom. Heraclides	55:W, 42:N	Observed a volcano on the moon.	F 10: Mr 10	F21-22	56 58 60 18 54 13 57 14		3.5:	.73: .72:	305: -110:R	-11: Mr 13		Caroché	France?			MB	31	2	B
77	7/ 2/97		M. Vaporum	5:E, 13:N	Vapors resembling a mt.										Schroter, Olbers	Lilienthal, Bremen Germany	19 L R44X		MBMW	32	5*	G
78	/ /99				Darkside: bright spots seen during 5 lunations.										Piazzi	Palermo, Sicily			"	33	3*	B
								1800 A.D.														
79	9/ 7/20				Suspicious obscuring phen. on dark plain(sea).					4:		318:	-11:						Cl	288	2	G
80	10/17/20	2000?	S. of Sin. Iridum	30:W, 40:N	Brilliant spots in M. Imbrium					10.5		36: 6:R	-3.4: O 21 16								1	B
81	2/ 4/21	1730?	Aristarchus	47W, 23N	Seen in dark part-bright pt. in it, 6-7th mag., 3-4'diam. Luminous. (indep. confirm. ?)	Ja 07: F 04	Ja 23:	60 27 60 27		2.0:	.00: .00:	295: -112:R	-12.4: F 17 01		Kater, Ward	Germany? England?			F, K	35	5*	B
82	2/ 5/21	1800?	"	"	Looked like a cloudy spot. Olbers tho't due to magnification.	F 04 Mr 04:	F 20	60 27 60 23 54 01 60 15		3.0:	.05: .04:	306: -101:R	-11.3: F 17 01		Garding	Bremen, Germany	132X		K		1	G
83	2/ 5/21	1800?	"	"	Bright point in crater., 6th mag.	"	"	" " "		"	"	"	"		Olbers	"	R44X		F, K	36	4*	B
84	2/ 5/21 6	1800?	"	"	6-7th mag., 3-4'diam. luminous. (similar to #81, confirm of Olbers?)	"	"	" " "		3.0: 4.0:	.05: .08:	"	"		Kater, Olbers, Browne	Bremen, Ger. England?	R44X		MB	37	5*	B
85	2/ 6/21	1900?	"	"	Looked like a cloudy spot. (confirm. of Kater, Olbers & Browne?)	"	"	" " 66 15 60 08 60 00		4.0:	.08: .07:	318: -89:R	-10.3: F 17 01		Ward, Bailey	England? "?	large aper. 80X		F	38	5*	G
86	2/ 7/21	2000?	"	"	Looked like a cloudy spot. (ordinary appear. in ashen lt?)	"	"	" "		5.1:	.11:	332: -75:R	- 9.2: F 17 01						F		1	G
87	4/ 7/21	1800?	Posidonius	28E, 32N	Small bright crater in it was shadowless. Schroter also saw it shadowless several X.	Ap 02: Ap 30	Ap 17:	61 06		5.1:	.18:	332: 0:R	- 9.8: Ap 17 12		Gruithuisen	Munich, Germany				39	4*	G
88	5/ 2/24	2100-2115	near Aristarchus	47:W, 23:N	Saw a soft(matte)light like a star seen thru mist. Brightness increased suddenly to mag. 9-10 star. After several secs became weak, finally disappear. Repeated this 3 or 4 X in 15m. Moon was very narrow sickle & major feat. could be seen in ashen lt. (date given was 1821 but is 1824. See # 99).	Ap 30 My 28:	My 12-13	61 06 54 01	1/4h	0.9:	.07:	281: -126R	-14.2: My 17 04		Göbel	Germany?		S=E		44	4*	B, G
89	5/ 4/21 6	2130-2200; 2145	Aristarchus	47W, 23N	In dark part, appearance of a small comet extended toward Grimaldi. Light similar to a glow worm. Never before had seen anything like it-not last lunation. Confirm. by Bailey & Ward on 4th.	"	"	" " 59 19 58 51	1/2h	2.9, 4.9 .21	.20 .14:	295: -100:R 320: -75:R	-10.3 My 17 04		Ward, Bailey, Olbers	England? England? Bremen, Germany	ge, Ap, 80X R		MB	36, p159	5*	B, G
90	7/25/21	0330	near Aristarchus	47:W, 23:N	Brilliant flashing spots on dark side. Disappeared after a short while then re-appeared.	Jy 20 Au 17:	Au 04	59 20 58 25 54 11 58 13		25.6	.14 .17:	218: 9:S	+10.0 Jy 15 04		Gruithuisen	Munich, Germany			MB	40	4*	B, G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Dates of Perigee	Date of Apogee	Horizontal Parallax	Duration	Age	ϕ	Colon. Term Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ , β		m d h	m d h	π p π a π		d	π d	°	m d h				Ap K Pv					
								1800 A.D.														
91	11/28/21	2200?	Aristarchus	47W, 23N	Bright 8th mag. star-like pt.	N 10: D 7-8	N 23-24			4.1:	.65:	320: -87:R	-10.2: D 09 04		Fallows	Capetown, S. Africa			F	41	3	B
92	11/29/21	2200?	"	"	Bright star-like point.	"	"			5.1:	.68:	332: -75:R	- 9.2: D 09 04		"	"			"	41 p237	3	B
93	11/30/21	2300?	"	"	" " " "	"	"			6.1:	.72:	345: -62:R	- 8.1: D 09 04		"	"			"	41	3	B
94	11/ /21	1900?			Bright spots on moon. (if early phase, date would be 26th-29th & other instances mentioned, fixed streaks of light in dark part--1st one stated as moving.)	"	"						D 09 04			England?			F p208	39	2	B
95	1/27/22	2000?	near Aristarchus	47:W, 23:N	8th mag. star-like point--seen thru overcast! (Klado gave date as 1821 but must be an error).	Ja 03? Ja 31	Ja 16	58 41 59 14 54 11 58 48		4.6:	.90: .86:	326: -81:R	- 9.5: F 06 06		F. Struve	Pulkovo? Russia			MB, K	42	4*	B
96	6/22,/22 23	2130?	Aristarchus	47W, 23N	Lunar volcano.	Je 18-19 Jy 16-17	Je 04-05			3.6:	.14	313: -94:R	-11.6: Jy 04 11		Rüppell	Germany?			MB		1	B
97	/ /22				Volcanoes on moon, several occasions, lunar volcano.										Flauergues, Zach	France? Germany			MBMW	43	1	B
98	1/27/24	0300?	"	"	Reddish color.					25.8:		229: - 2:S	-10.8: Ja 16 09		Gobel	Koburg, Germany			C1		4*	R
99	5/ 1/24	2100?	near Aristarchus	47;W, 23:N	Blinking light of 9-10th mag. on dark side.	Ap 08: My 06	Ap 22	58 13 59 16 54 11 58 25		2.6	.82	302: -105:R	-11.2: My 13 02		"	"			MB	44	4*	B
100	7/ 4/24	2300?	Aristarchus	47W, 23N	Star-like light in crater (in dark).	Jy 01: Jy 28:	Jy 14:			8.0:	.14:	17: -30:R	- 6.2: Jy 11 04		Emmett	England?			M	45	3	B
101	10/18/24	0500?	near Aristarchus	47:W, 23:N	mingling of all kinds of colors in small spots in NW of crater. (wrong date? interposition of years? see #121)	O 19-20	O 03-04	59 58 60 15 54 04 60 06		25.3	.96: .96:	210: 17:S	+10.0: O 08 04		Gruithuisen	Munich, Germany			MB		4	R, V, B
102	10/20/24	0500	M. Nubium	15:W, 20:S	Bright area 100X200km on dark side.	O 19-20 N 16:	O 31:	60 15		27.3	.02: .02:	235: -40:S	+12.0 O 08 04		"	"			MBMW	46	4*	B
103	11/ 8/24	0000?	Cobra Head	48W, 24N	Mingling of all colors in small spots. Described a violet glimmer near Cobra Head & plateau that spreads; starts just after sunrise.	"	"			16.7:	.71:	105: 123:S	+1.2: N 06 19		"	"				47	4*	R, V, B
104	12/ 8/24	0000?	Plato	9W, 51N	Bright fleck in SE part of crater.	N 16: D 14:	N 29:			17.2	.79:	109: 80:S	+1.6: D 06 10		"	"			MBMW	48	4	B
105	1/23/25	0200?	Aristarchus	47W, 23N	Star-like point.	Ja 10-11 F 09-10:	Ja 22:			3.9:	.53: .43:	318: -89:R	-11.4: F 03 12		Eng. Officers on HMS Coronation	Gulf of Siam	naked eye? or Spyglass?		F	49	5	B
106	4/ 8/25	0100	Plato	9W, 51N	West part of crater brighter tan East part.	Ap 02: Ap 30	Ap 14-15	60 41 53 58		19.4:	.23: .21:	153: 36S	+4.7: Ap 03 06		Gruithuisen	Munich, Germany			MBMW	48	4*	B
107	4/22/25?	0030?	Aristarchus vicinity	47;W, 23:N	Points of light in center; in low magn. appeared as a small star, somewhat scintillating. At higher magn. became larger & diffused. (date 1824? Ref. refers to a ref. dated 1824--if so age would have been 23d. Continuation)	"	"	" "		3.6:	.69: .71:	314: -91:R	-10.6 My 02 15		Argelander, Gobel	England? Koburg, Germany			MB	44 p164	5	B
108	12/ 1/25	2345	Ptolemaeus	3W, 10S	Bright spot.					21.7		167 16S	+6.3 N25 16		Schwabe	Germany?			MBMW	50	4*	B
109	4/12/26	2000	M. Crisium	60:E, 15:N	Black moving haze or cloud.					5.4		342: 42:R	-9.5 Ap 22 08		Emmett	England?			"	51	2	G, D
110	4/13/26	2000	"	"	Cloud less intense.				1h	6.4		354: 54:R	-8.5 Ap 22 08		"	"			"	52	2	G, D
111	7/ 4/ 32	2000?	"	"	Brilliant, minute spots & streaks dotting its surface. (Shroter, Berr, Madler, Slack, & Ingall had all seen it this way at times too)					6.5		358: 58:R	-8.2: Jy 12 23		Webb	England?			F	53	3	B
112	12/25/32	1800?	near Aristarchus	47:W, 23:N	Bright spot.	Ja 06	D 25	33 57 61 15 53 57 53 58		3.6:	.50: .50:	310: -97:R	-11.6: Ja 06 08		Piazzi-Smyth	Edinburgh? Scotland?			MB	54	4	B
113	12/22/35	1830	"	"	Bright spot, 9-10th mag.	D 18-19 Ja 16-17:	D 31	59 42 61 17 53 58 59 15		2.9	.16 .14	307 -100R	-12.4 Ja 04 01		"	"			"	"	5	B
114	12/22/35	1700?	Aristarchus	47W, 23N	Star-like point. (indep. confirm. of Piazzi-Smyth?)	"	"	" " "		"	"	"	"		Baily	England?			F	55	5	B
115	2/15/36	2300?	Messier	46E, 3S	2 straight lines, & between a dark band covered with luminous pts. (opposite of view revealed by Orbiter missions) Year wrong? crater in dark, if 1837 it would be FM & fit desc.)	Ja 16-17:				25.8:		219: -85:S	-10.4 F 02 19		Gruithuisen	Munich, Germany			"	56	4*	D, B

No.	Date m d y	UT Time n m	Feature	Selenographic Coordinates λ ° , β °	Phenomena Description	Dates of Perigee m d h	Date of Apogee m d h	Horizontal Parallax 1800 A.D. π_p ' " π_a ' " π ' "	Duration	Age d	ϕ / $\frac{\phi}{d}$	Colon., Term. Dist. °	Days fr. FM & d m d h	$K_\odot$, $\Sigma K_\odot$	Observer	Location	Telescope Ap K Pw	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
116	/ /37		Linné	12E, 28N	Crater described as 1.4 mi (2km) diam. & deep (prob. not LTP).										Beer, Mädler	Berlin, Germany	3.75 R			57	0	
117	6/24/39	2200?	Grimaldi	65W, 5S	Smoky gray mist.					13.3		67: 2:R	-2.1: Je 27 00		Gruithuisen	Munich, Germany			MBMW	58	4*	G
118	7/ 7/39	0200?	S. Pole	41:W, 90S	Twilight.					25.5		221: 0 S	+10.0 Je 27 00		"	"			"	"	3*	G
119	7/19/39	2200?	Schröter	7W, 3N	Dark mist.					8.9:		15: 8:R	-6.6: Jy 26 12		"	"			"	"	4*	G, D
120	7/ 8/42	0702			Moon occasionally crossed by bright streaks dur. sol. ecl.					0.0		270	-14.2 Jy 22 11						"	59	2	B
121	10/18/42	2300?	Aristarchus vicinity	48W, 24N	Mingling of all colors in small spots in W. & NW of crater. (interposition of year dates? see #101 --1842 prob correct)					14.7:		84: 37:R	-0.5: O 19 12		"	"				60	4*	R, V, B
122	7/ 4/43	2115-2200	S. of Alps	4:E, 43N	Bright pt. glowing like a star on the S. extension of the Alps. On the following eve. found a small mt. which he did not see before.	Jy 05	Je 20	59 17 54 13 59 11		6.7:	.95: .94:	356: 0 R	-6.7 Jy 11 17		Gerling	Germany?			MB	61, 135	1*	B
123	4/25/44	2000?	SW of Pico	10:W, 44:N	A bluish glimmering patch of light not quite within the dark side.	My 02	Ap 19	61 22 53 56 56 27		8.6:	.69: .78:	6: 4:R	-6.8: My 02 15		Schmidt	Athens, Greece	7 R		"		4*	V, B
124	3/18/47 19	1800?	S. ? Limb	90W, 60S	Singular appearance of dark side. Luminous spots there & general glow on upper (S?) limb. Whole shaded part seemed to be a mixture of light & shades. (indep. confirm. ?).	Mr 16	Mr 29	61 23 53 56 60 24		2.3: 3.3:	.11: .08: .14: .11:	295:	-13.1 -12.1 Mr 31 21	A on 19	Rankin, Chevalier	France?, France?			F p398	62	5*	B
125	12/11,/47 12	1800	C. Agassiz? or Plato? or Teneriffe mts.	15:W, 48:N ?	Abright spot @1/4 ang. diam. of Saturn, varied intermittently at all times visible on dark side. Following day glimpsed same spot thru clouds. From drawing, the spot was @5' below the true N. point & near the following limb (IAU E. limb) (Plato fits ang. dist. better than either of other 2 unless there was a large N. libration).	D 18	D 02	59 44 54 05 57 40	1d?	3.9, 4.9	.78 .75, .79	318 57:R	-10.2 - 9.2 D 21 22		Hodgson	Eversley, England	R 80X L 40X		F p398	63	3*	B, G
126	3/19/48?	2100			Luminous pts. seen dur. ecl. (yr. 1847 given by M. must be wrong as age is 2.7d for this date in 1847 & couldn't be 18-19 as in M because ecl. is at 19d 21h (mid) in 1948. aux. data here are for 1948. (indep. confir.?)					14.3		90	0.0 Mr 19 21		Rankin, Chevalier	France? France?			M	62	5*	B
127	3/19/48	2112			During eclipse, rapid changes in red color. (confirm. of Rankin & Chevalier?)					"		"	"	A	Forster, Bruges	England, France?			MBMW	64	5	R, G
128	2/11/49	0200?	Posidonius	28E, 32N	Bright little crater in it was shadowless. Schröter saw repeated changes in it & others & once saw this crater's shadow replaced by a gray veil. Gruithuisen saw the same thing as Schröter in 1821.					17.7:		133: 19:S	+3.6: F 07 11		Schmidt	Athens, Greece	7 R		P	65	4*	B, G
129	12/27/54	1800-2300	nr. Plato in Teneriffe mts.	15:W, 48:N	2 luminous fiery spots on bright side on either side of a ridge, contrasting color. Seemed to be 2 active volcanoes. Ridge was normal color. Spots were yellow or flame color. Never seen before in 40 yrs. of observing.	D 20	Ja 05	61 01 54 00 57 17 56	5h	7.9+ 8.2	.29 .28	15 0R	-6.5 Ja 03 08		Hart, & others	Glasgow, Scotland	10 L		MB	66	4*	R, B
130	6/20/55	2100?	Limb		Trace of twilight (also seen by Gruithuisen, Henry & others at times. Webb gives low wt. to obs. "for want of better optical means")	Je 03 Jy 01 07	Je 19 06	59 48 60 54 12 54 16:		6.2:	.54: .63:	339:	-9.2: Je 29 23		Webb?	England?	3.7 R ?or 5.5 L?			65 p96 97	1	G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Dates of Perigee	Date of Apogee	Horizontal Parallax	Duration	Age	ϕ	Colon., Term. Digt.	Day fr. FM & nr. FM	Solar K_p ΣK_p	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom Type
	m d y	h m		λ , β °		m d n	m d n	π_p π_a π		d	π_u	°	m d n				Ap K Pw					
								1800 A.D.														
131	4/ 8/56	2000?	Boussingalt	57E, 70S	Noted weak glows in the crater he tho't prob. due to wall reflections on floor.					3.6:		316: 13:R	-11.6 Ap 20 09		Schmidt	Athens, Greece	7 R		MBMW	378	0	B
132	4/24/60	2000?	"	"	Noted weak glows on the crater he tho't prob. due to wall reflections on floor.					3.6:		314: 11:R	-10.5 My 05 07		"	"	" "		"	"	0	B
133	6/12/62	0619			Dur. ecl., on W. side--dark brick-red & something seemed to oscillate before it. At mid-ecl. on the S. side "a very small meniscus was seen nearly the color of the uncecl. moon".	Je 11 18 Jy 09 08	Je 24 15	61 19 60 49 53 59 61 04		14.7	.02	90	0.0 Je 12 06			France?			"	67	0	R, G
134	5/15-/64 16	2300-0100?	E. of Picard	55E, 15N	Remarkable bright spot.	Ap 30 23 My 26 00	My 13 09	59 30 59 27 54 14 54 55:		10.0:	.55: .60:	26: 81:R	-5.5: My 21 13		Ingall	Camberwell, England?			F	68	3	B
135	10/16-/64 17	2300-0100?	"	"	Remarkably bright spot.	O 13 05 N 11 06	O 25 06	60 49 59 57 54 06 59 30:		16.1:	.13:	105: 20:S	+1.7: O 15 06		"	"			"	"	3	B
136	/ /64				Bright spot.										Birt				MBMW	69	3	B
137	1/ 1/65	1800-1830?	S Eof Plato ft. of Mt. Blanc	0, 46N	Small bright spot like 4th mag. star slightly out of focus. Bright speck changeless for 30m. light was steady. (Same place as Schroter saw a phen. see #50 &62).	D 31 19 Ja 28 15	Ja 16 18	59 43 60 37 54 10 59 42	1/2h	3.9:	.03: .03:	322: 16:R	-9.8: Ja 11 23		Grover	Eng. ?or US?		S=G? clear	F	70	3*	B, G
138	4/11/65	0000	E. of Picard	55E, 16N	Minute pt. of light glittering like a star. Whole of M. Crisium intersected with bright veins mixed with bright spots. (4h before FM.)	Mr 27 00 Ap 24 10	Ap 09 04	61 24 61 00 53 59 54 08		14.8	.20	87 142R	-0.2 Ap 11 04		Ingall	Camberwell, England?	4.5		F	70 p189	3	B
139	9/5-/65 6, 7	2300?, 0300?	"	"	Conspicuous bright spot. Also on 7th, absent on 8th. Cloud-like effect where light had been on 8th).	Au 09 07 S 06 09	Au 25 03	60 12 60 58 54 05 60 50		15.7, 16.7:	.99:	97:, 109: 28:S, 16:S	+0.5:, +1.5: S 05 14		"	"	" ?		F	70 p252	3	B
140	11/24/65	2000?	Carlini	24W, 34N	On the dark side, a distinct bright speck like an 8th mag. star in the crater. (confirm. ?)	N 02 18 D 01 04	N 15 11	61 18 60 44 54 01 57 25	1.5h	6.3:	.73: .79:	344: 40:R	-8.0: D 02 19		Williams, & 2 others	England?	4			65 p125	5	B
141	/ /65		M. Crisium	55:E, 15:N	Dots & streaks. (confirm. ?)										Slack, & Ingall	Camberwell, England?			MBMW	65 p105	5	B
142	4/22/66	2000?	Ptolemaeus	4W, 9S	Crater on term., usually smooth surf. seemed much diversified & gave impression, as at many other times that there was an obscuring medium.	Ap 14.8 My 13 21	Ap 26	61 21 61 23 53 58 56 30		7.5:	.29:	10: 6:R	-7.0: Ap 29 21		Ingalls	Champion Hills, Eng.				71	3*	G
143	6/10/66	0300?	Aristarchus	47W, 23N	Star-like pt. (on darkside or is date 6/9/66 at 2200?)	My 13 21 Je 11 05	My 27 01	61 23 60 59 54 00 60 35		26.5:	.92: .96:	232: 5:S	+11.6: My 29 13		Tempel	Marseilles, France			F	72	4	B
144	6/14-/66 16	2130?	"	"	Reddish-yellow. (in dark part	Je 11 05	Je 23 12	60 59 54 06 59 53 59 30	days ?	2.0:-4.0:	.15: .11: .18:	295:-319: +112:-88:R	-13.3:-11.3: Je 28 04		"	"			MB	73	4*	R
145	10/16/66	2300?	Linné	12E, 27N	Noticed on this date that it had disappeared as a crater & was now a white patch with a small hill or craterlet. White part seems to increase in size. (prob. not LTP).	S 27 02 O 25 05	O 13 00	60 12 61 00 54 04 55 17:		8.3:	.71:	1: 13:R	- 7.0 O 24 00		Schmidt	Athens, Greece	7 R		P	27	0	B
146	12/14/66	2000?	"	"	Seen as a white spot, had been a fine black spot before as seen by Schmidt. (Also Buckingham in Dec. 1866; also D 16, 25th, 27th, --not LTP?)	N 22.0 D 19.8	D 06.1	61 28 61 21 53 56 59 12:		7.6	.81:	355: 7:R	-7.0: D 21 21		Schmidt ?	Athens, Greece ?	7 R?		F	75	0	B
147	/ /66				Bright spots on dark side.										Hodgson	Eversley, England	R		MBMW	76	2	B
148	1/14/67	2000?	"	"	White covering had seemingly disappeared, was a dark spot. Definition (seeing?) was poor.	D 19.8 Ja 18.0	Ja 02.4	61 21 60 44 53 58 59 54		8.3:	.89:	19: 31:R	-5.5: Ja 20 08		Knott	England?			F p429		1	D
149	1/16/67	2000?	"	"	Strong impression of a small central darkspot on it. Says it may have been an illusion.	"	"	" " 60 38		10.3:	.96: .94:	43: 65:R	-3.8: Ja 20 08		"	"			"		0	D
150	3/15/67	2000?	"	"	Excessively minute black dot in middle of feature. A geom. fig. bordered & centered with black that formed, dissolved, & formed again.	Mr 12.3 Ap 08 01	Mr 27.3	59 53 58 42		9.5:	.13:	30: 42:R	-4.6: Mr 20 09		Dawes	England?			"		3*	G, D

No.	Date m d y	UT Time h m	Feature	Selenographic Coordinates λ φ	Phenomena Description	Dates of Perigee m d h	Date of Apogee m d h	Horizontal Parallax π_p π_a π	Duration	Age d	ϕ / π d	Colon., Term. Dist. °	Days in FM & nr. FM m d h	Solar K_p ΣK_p	Observer	Location	Telescope Ap K Pw	See-ing	Inform. Source	App. No.	Rel. Wt.	Phenom. Type
								1800 A.D.														
151	4/ 9/67	1930-2100	Aristarchus	47W, 23N	7th mag. star-like pt. became fainter, almost extinguished at 9PM. He had seen lights before, but never so strong.	Ap 08 01 My 05 23	Ap 23 22	59 53 54 09 59 41	1.5h	5.4	.06 .07	335 -72R	-9.1 Ap 1823		Elger?	Liverpool, England ?	4?				4	B,G,D
152	4/12/67	1930-2100	"	"	Seen in earthshine, grew fainter 7th mag. star; much fanter in last 15 min. & barely perceptible at 9PM. Had seen something similar on former occ.	"	"	" " 58 34	1.5h	8.3	.16 .17	14 -33R	-6.1 Ap 1823		Elger	"	4		ALPO (W)	65 p93	4	B,G,D
153	5/ 6,/67 7	2000-2200?	"	"	Reddish-yellow beacon-like light. Left(E. ?)side of crater very bright luminous pt. (independent confirmation?)	My 05 23 Je 02.8	My 21 12	60 43 61 15 54 01 60 20	2h ?	4.0	.08 .08	320: -87:R	-11.3 My 1802		Tempel, Hammarica	Germany? France ?			F p430	78	5*	R,B
154	6/10/67	2200?	Sulpicius Gallus	12E, 19N	3 distinct roundish black spots. Absent on 13th.	Je 02.8 Jy 01.3	Je 17.1	61 15 61 21 53 58 57 00:		8.0:	.28:	16: 28:R	-6.3: Je 1705		Dawes	England?			"		3*	D
155	8/ 6/67	2100?	Linné	12E, 27N	Crater in darkness, he saw a "rising oval spot". Other obs. saw it as a triang. bold black spot pointing to earth, slowly diffused white & drift of white on slope of pyramid. (indep. confirmation?)	Jy 29.5 . Au 27.5	Au 10.5	60 57: 55 30: 60 12: 54 06		7.2:	.29:	1: 13:R	-8.6: Au 1510		----, Buckingham	England?			"	80	5*	G,D
156	10/ /67		"	"	Seen as a convex spot.	O 18 03	O 05 18						O 13 13						F	81	1	G
157	/ /67				Bright spots on dark side.										Williams	England?			MBMW	82	2	B
158	1867-1877		Messier	46E, 3S	Filled with mist which welled up from the floor & covered the western(Ast.)wall.										Klein	Cologne, Germany				83, 90	4*	G
159	7/28/68	2000?	Linné	12E, 27N	Shadow not so marked-had a light penumbra, indicated a feeble cavity. Other craters had a black shad. On 29th appeared completely white. Crater normal on 26th. (letter to Madler Sep. 16, 1868.)	Jy 20 13 Au 17 23	Au 04 00	61 15 61 21 53 58 55 45:		8.9:	.31:	28: 40:R	-5.7: Au 0312		Tacchini	Palermo, Italy				84	4*	G
160	/ /68		Alpetragius d	5W, 15S	Reported it as a white spot (still is) whereas Beer & Madler drew 2 craterlets 1 lettered d, @ 5 mi. diam. "d" is no longer there(Neison).										Schmidt	Athens, Greece	7 R?		P	85	0	B
161	8/ 7/69	2218			20 min. before totality (of a sol. ecl.) a star-like object seen on the lunar surface.	Jy 12 05 Au 09 13	Jy 28 00	59 56 60 43 54 07 60 05		0.0	.94	270	-13.7 Au 2116		Swift	England ?			M		3*	B
162	8/23,-/69 24?	2300-0100?	Plato	9W, 51N	Group I of craterlets (as designated by several famous obs. before) exhibited notable illumination, accompanied by a single light on a distinct spot. (if obs. similar to Ap 1870 obs. then date =Au 23-24).	Au 09 13 S 06 20	Au 25 03	60 44 54 04 61 18 54 09 54 01		16.6:	.48: .53:	118: 71:S	+2.3: Au 2116		Gledhill?	Halifax, England	9 R		F	86	2	B,G
163	9/21-/69 22?	0000?	"	"	Group I craters-notable illum. accomp. by a single light on a distinct spot. (similar to Aug. obs. & if same phase as Ap 1870, date =22nd.)	S 06 20 O 04 19	S 20 20	61 18 53 58 61 24 53 57 54 01		16.3:	.54: .55:	110: 79:S	+1.6: S 20 09		"?	"	"		F p431		2	B,G
164	2/17-/70 18?	0000?	"	"	Illum. of another group of craters different from group in Aug. & Sep. obs. (date is F18 if phase is similar to Ap 1870)	Ja 21 14 F 18 04	F 06 09	60 19 60 29 54 09 60 29		17.9:	.01: .01:	119: 70:S	+1.9: F16 04		"	"	"		"		2	B,G
165	3/18-/70 19?	0000?	"	"	Same group as in Feb. illuminated. (if phase same as Apr. 1970 then date is Mar. 19).	F 18 04 Mr 18 12	Mr 0602	60 29 61 11 61 13 54 01 61 10		17.2:	.04: .04	113: 76:S	+1.4: Mr 1714		"	"	"		"		2	B,G
166	4/17/70	2200?	"	"	Group I again is illum. as in Aug., Sep. 1969 observations.	Ap 15 22 My 14 08	Ap 2823	61 28 61 12 53 56 60 44		16.8:	.09		120: 69:S	+2.0: Ap 1522	"	"	"		"		2	B,G
167	5/10-/70 11, 12	2200?	"	"	Extraordinary display of lights. Says not effect of sunlight.	"	"	" " 59 41 60 22 60 54		10.1: 11.1: 12.1:	.90 .93 .97		14: 26: 38: 5-29 R	-3.8: -2.8: -1.8: My 1418	Birt	England			"	398	4*	B,G

ORIGINAL PAGE IS
OF POOR QUALITY

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Dates of Perigee	Date of Apogee	Horizontal Parallax	Duration	Age	φ	Colon. Term Dist	Days fr FM & Ar. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref	W.	Phase Type
	m d y	h m		λ , β		m d h	m d h	πp πa π		d	d	°	m d h				Ap K Pa					
								1800 A.D.														
168	5/13/70	2200?	Plato	9W, 51N	Extraordinary display of lights. 27 seen by Pratt, 28 by Elger, only 4 by Gledhill. (indepen. confirm. ?)	Ap 15 22 My 14 08	Ap 28 23	61 28 61 14 53 56 61 10:		13.1:	.99: .99:	50: 41:R	-0.8: My 1418		Pratt, Elger, Gledhill	----- Liverpool, Brighton, England			F p431	87	5*	B, G
169	8/12/70	2100?	"	"	Light#22, remarkable increase in brightness. #22 subsided & #14 shone out then faded & #16brightened. (Fort says that till Apr. 1871 selenog. recorded 1600 obs. of fluctuations of lights in Plato & had drawn 37 graphs of indiv. lights. These were deposited in the library of the R.A.S. by Birt)	Au 03 14 Au 29 22	Au 18 01	59 20 59 38 54 13 55 55:	min?	15.4:	.34	114: 75:S	+1.4: Au11 09						F p433	399	3*	B, G
170	/ /70				White spots on moon--"lightning".										Birt	England			MBMW	88	3	B
171	/ /70		Godin	10E, 2N	Purplish haze illum. floor still in shadow. On several occasions other parts of moon. Sun just rising--didn't think it was due to reflections.										Trouvelot	Cambridge, Mass.	6 R		P	89	3*	V, G
172	1870-1880		Tycho	11W, 42S	Brilliant crater, another one to show frequent mistiness in it (Elger remarks that its floor is never very distinct.)										Birt	England			 p327	373	3	G
173	12/25/71	2200?	Moretus?	6?W, 70S	Internal twilight in crater #132-a large crater nr. S. pole. (crater #132 on Goodacre's map is Plato. Webb's map?)	D 12 15 Ja 10 03	D 26 21	61 20 61 20 53 58 54 00:		13.7:	.48: .48:	84: 78:R	-1.0: D 2622		Webb?	England?	9 L?			91 65 p101	3*	G
174	/ /71		Plato	9W, 51N	Streak of light across floor while crater was in shadow. (light between wall peaks?).											Elger	Liverpool, England	8.5L		MBMW	92	1	B
175	/ /71		E. of Plato	8:W, 51N	Fog or mist. (from sinuous rill? found on LOIV photos? indep. confirm. ?).										Elger, Neison	Liverpool, ------ England	"		"	78	5*	G
176	/ /71?		Plato	9W, 51N	Craterlets on floor varying-look like lights. They were numbered & put in groups. (several obs. watched these & compared & found diff. in behavior.)										Gledhill	Brighton, England			F	87	3*	G, B
177	3/15/72	2000?	"	"	Internal twilight in crater. (same remarks as in #173--could S. be misprint in #173? Schmidt 2X saw cavity of Boussingalt feebly illum. at sunrise as tho filled with mist.	Mr 06 14 Ap 01 22	Mr 18 10	59 56 59 16 54 14 54 47:		6.4:	.40: .37:	346: -23:R	-9.3: Mr 2502		Webb?	England?	9 L?			65 p101	3*	G
178	3/19/72	2317	Sinus Iridum	30:W, 46N	Covered with a light gray shadow thru which he saw dimly the surface below-indicating obscuring matter over it. (only W. 1/3 of bay would be in shadow as boundaries are 25°-37°W.)	"	"	" " 54 25		10.5	.57 .53	33 3:R	-5.1 Mr 2502							93	3*	G
179	7/16/72	2100?	Plato	9W, 51N	NW portion of floor was hazy.	Je 22 04 Jy 20 13	Jy 07 00	61 08 61 23 53 56 59 47:		11.1:	.87:	43: 34:R	-3.8: Jy 2014		Pratt	England?			MBMW	94	3*	G
180	1/ 4/73	2300?	Kant	23 E, 12S	Luminous purplish vapors.	D 31 14 Ja 29 01	Ja 16 02	60 54 61 24 53 59 58 46:		5.7:	.19: .16:	333: 4:R	-8.7: Ja 1316		Trouvelot	Cambridge, Mass.	6 R		P	89	3*	G, V, B
181	4/10/73	2100?	Plato	9W, 51N	Under high sun, 2 faint clouds in E. part of crater.	Mr 26 23 Ap 23 20	Ap 07 23	60 47 59 55 54 06 54 40:		13.3:	.53:	67: 58:R	-2.1: Ap1222		Schmidt	Athens, Greece	6 R?		MBMW	95	4*	G
182	11/ 1/73	2000?	"	"	Unusual appearance.	O 05 07 N 02 13	O 17 16	61 10 60 27 54 02 60 25:		11.4	.98:	52: 43:R	-2.9: N 04 16		Pratt	England?			"	94	1	
183	1/ 1/74	2000?	"	"	Unusual appearance.	D 24 21 Ja 20 20	Ja 09 03	59 19 60 10 54 12 57 05:		13.1:	.30:	77: 68:R	-1.0: Ja 0219		"	"			"	"	1	
184	7/14,/75 15	0200 0200			Luminous projection from upper(N?)limb. Phenom. was absent there on next nite, but a smaller 1 at another pt. (not an LTP?-but many such repts.)	Jy 01 13 Jy 29 08	Jy 13 14	60 42 54 10: 59 54 54 09 54 09:		10.9, 11.9	.49 .42, .46	35:	-4.4 -3.4 Jy 1813		Davidson, Loftus	HMS Coron. Gulf of Siam Champon Bay, long. 99°	naked eye and binoculars?		F	96	5	B

No.	Date m d y	UT Time h m	Feature	Selenographic Coordinates λ , β	Phenomena Description	Dates of Perigee m d h	Date of Apogee m d h	Horizontal Parallax πp πa πf	Duration	Age d	φ d	Colon. Iferm. Dist. °	Days fr. FM & nr. FM d m d h	Solar	Observer	Location	Telescope Ap K Pw.	See-ing	Inform Source	App. Ref.	Wt.	Phenom Type
								1800 A.D.														
185	2/20/77	2130-2230	Eudoxus	16E, 45N	Fine line of light like a luminous cable, drawn W. to E. across crater.	Ja 29 02 F 26 14	F 11 04	61 28 61 02 53 57 57 45:	1h	7.6	.82	357 13R	-6.9 F 27 19		Trouvelot	Meudon, France	13 R?		F p441	97	1	B
186	2/27/77	1919			Flickering light on lunar surf during lunar eclipse.	F 26 14 Mr 26 16	Mr 10 18	61 02 60 12 54 04 60 46		14.5	.06	90	0.0 F 27 19		Dorna				F	98	2	B, G
187	3/17/77	1845	Cusps		Moon's horns showed trace of atmosphere.	"	"	" " 56 19		2.6	.68	302 0R	-11.6 Mr 2906		Denett	England?	2.75 L		"	99	2	G
188	3/21/77	2000?	Proclus	46E, 16N	Brilliant illum. --not from sun.	"	"	" " 59 01:		6.9:	.84:	354: 40:R	-7.5: Mr 29 06		Barrett	England?			"	100	2*	B
189	5/15/77	2030	E. of Picard	56E, 15N	Bright spot. (white patch there unlikely to be bright at sunrise normally.)	Ap 22 16 My 17 17	My 05 08			2.6	.95 .94	304 0R	-11.4 My 27 04			England?			F p442	" p335	3*	B
190	5/27/77	2200?	Hyginus N	6E, 9N	New crater 3mi. diam. Didn't see anything there 12 yrs. previously in studies. (Schmidt showed it sometimes dark, sometimes light, sometimes not at all. Neison studied region minutely 20X from July 1870-Aug. 1875 & did not record it. Fauth says it's not new. (changes there?)	My 17 17 Je 14 00	Je 02 02	59 29 60 25 54 17 55 50:		14.7	.33: .39:	98: 76&S	+0.7: My 27 04		Klein	Cologne, Germany	6 R?		P, F	85, 101	1	
191	5/29/77	0030	E. of Picard	56E, 15N	Bright spot. (nr. sunset, should normally be faint? as in Kuiper atlas where it is invisible.)	"	"	" " 54 31:		15.8	.35 .41	110 14S	+1.8 My 27 04			England?			F p447	100 p335	3*	B
192	6/14,77 16	2000:, 2000?	W. limb	90W,	Noted variations of brilliancy along dark limb-resembled light of a moving mirror held in strong light against shadow of a dark hall. Faint greenish-blue streamers resembling terr. aurorae streamers. He tho't they were same cause on moon. Fainter on 16th.	Je 14 00 Jy 12 02	Je 29 18	60 16 60 11: 60 58 54 06 59 28:	2d?	3.2: 5.2:	.04: .05, .12 .12	313: 137:R, 357: 113:R	-10.9: -5.9: Je 25 17		Harrison	U.S.?			F p442	102	3	V, B, G
193	6/15/77	2000?	E. of Picard	56E, 15N	Bright spot. (should be faint or invis. indisting. on Orbiter 4 photo.)	"	"	" "		4.2:	.08:	325: 21:R	-9.9: Je 25 17		Birt	England			F p442	102	3*	B
194	6/17/77	2230	Bessel	17E, 23N	Tho't he could detect a minute pt. of light shining out of dark in crater. (no high peaks in Bessel to catch light.)	"	"	" " 58 23		6.3	.16 .16	354 11R	-7.8 Je 25 17		Denett	England?	2.75 L		F	100 p432	3*	B
195	6/17/77	2100?			A light on dark side. Also a luminous pt. (not identified, could be confirm. of Denett in Bessel?)	"	"	" " "		"	"	354	"		Harrison	U.S.?			F	102 p442	3	B
196	7/29/77	0200?-0230	Plato	9W, 51N	S. of crater a bright streak that disappeared at 0230.	Jy 12 02 Au 09 11	Jy 27 05	61 00 61 21 54 00 54 11	1/2h?	18.2	.60	132 57S	+3.8 Jy 25 07		Gray	England?			MBMW	78	3*	B
197	8/23-/77 24	2310-0100?			Lunar ecl. -unusual spectrum with strong absorp. in yellow (Airy) 2 patches of crimson light of short duration. (confir.) (Airy was Atronomer Royal)	Au 09 11 S 06 21	Au 23 07	61 21 61 14 53 59 54 00	min?	14.8	.51	90	0.0 Au 23 23		Airy, Pratt Capron	Greenwich, England, France?			"	103	5*	R
198	11/13,/77 14	2000?	Hyginus N	6E, 9N	Standing out with such prominence, seen at a glance. No trace of it on 14th, in excell seeing. (indep. confirm. ?)	N 02 02 N 27 18	N 13 22	59 48 59 12 54 14 54 14:	hrs.	?8.5:	.51 .48 .55	9: 15:R	-7.1: N 20 22		Crain, Klein, Eng. officer	France? Cologne, Ger England?	6R?	S=E 14th	F p442		5*	D?
199	11/23/77	2200?	Plato	9W, 51N	A luminous triangular object on floor & each craterlet on floor outlined as a lum. pt. (indep. confirm. ?)	"	"	" " 58 15:		18.6:	.84	129: 60:S	+3.0: N 20 22		"	"	"		"	104	5*	B
200	2/ 2/78	0817	at limb		Changes in the spectrum during solar ecl. suggesting a lunar atmosphere.	F 18 18	F 05.6?			0.0	.38	270 0, 180	-15.2 F 17 11		several	Melbourne, Australia			MBMW	103	5*	G
201	3/10/78	1920	E. of Picard	56E, 15N	White patch badly defined.	F 18 18 Mr 18 06	Mr 04 04	61 24 53 56 56 08		6.7	.68 .73	344 40R	-8.1 Mr 18 21		Noble	England?			F	105	3*	B, G
202	10/ 3,/78 4	2000?	Hyginus N	6E, 9N	Most conspicuous of all appearances. No trace of it on 4th.	S 26 19 O 25 06	O 10 15	61 24 56 27 61 16 53 57 55 43:		7.2, 8.2:	.26: .30:	6: 12:R 18: 24:R	-7.5: O 11 09						" p442		3*	D?
203	10/ 5/78	2140	Plato	9W, 51N	Fog in W. part of crater. Faint shimmer like thin white cloud.	"	"	" "		9.3	.33	29 20R	-5.5 O 11 09		Klein	Cologne, Germany	6 R?		P	106 pc	4*	G, B
204	10/18,/78 19	2100?	Wargentin	60W, 50S	Webb's white spot on SW border was very brilliant, but had vanished on next nite (19th)	"	"	" " 54 06		22.2:	.79: .77	174 66:S	+7.4: O 11 09		Gaudibert	France?	4 R?		"	pc	4*	B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Dates of Perigee	Date of Apogee	Horizontal Parallax	Duration	Age	Colon. Term. Dist.	Days fr. FM & Dr. FM	Solar	Observer	Location	Telescope	See-ing	Information Source	Ref.	No.	Type
	m d y	h m		λ ° , β °		m d h	m d h	π ″ ′ ″ ′ ″		d	°	m d h				Ap K Pa					
								1800 A.D.													
205	10/21/78	0000-0300?	Terminator (M. Nubium)	23W,	1/2 of moon's term. obliterated for 3h. (that part over dark mare & blended in?)	S 26 19 O 25 06	O 10 15	61 24 61 16 53 57 58 58:	3h	24.4:	203: 08	+9.6: O 11 09		Hirst	England?			MBMW	102	0	G
206	11/ 1,/78 2	2000?	Messier	46E, 3S	Shaped like a half moon with E. edge missing. Appeared diffuse. Messier A was sharp & completely defined. Was sure there was fog there. Next day same appear. Shadow was diffused before noon, Mess. A is more yellow after noon, greener than Mess. At noon, both are same color.	O 25 06 N 22 15	N 06 20	61 14 60 36 54 03 55 50	1d	6.9: 7.9:	0: 46:R 12: 34:R	-8.3: N 10 02 -7.3:		Klein	Cologne, Germany	6 R?			107	4*	G
207	11/ 9/78	2100	Plato	9W, 51N	Faint, but unmistakable white cloud not seen before.	"	"	" " 54 28		14.9	86 77R	-0.3 N 10 02		"	"	"		MBMW	108	4*	G
208	11/13/78	0230	nr. Bacon, Barocius, Nicolai	20E, 52S 16E, 45S 25E, 42S	Lunar volcano (drawing) (investigation & correspondence cast doubt on location.)	"	"	" " 55 38		18.2	123 37:S	+3.0 N 10 02		Hammes, & others	Oskaloosa, Iowa	6.5 L		MB, MBMW	108	5*	B
209	12/ 4/78	2000?	Agrippa, & vicinity	11E, 4N	"Odd, misty look as if vapor were in or about them".	N 22 15 D 20 10	D 04 12	60 36 59 44 54 08 54 09:		10.4:	34: 45:R	-5.0: D 09 20		Capron	France?			"	94	3*	G
210	/ /78		E. of Picard	56E, 15N	White patch. (normal appear.? especially at FM)													"	109	1	B
211	/ /78		Tycho	11W, 42S	Interior of crater had a cloudy appearance.									Birt	England			"	"	3*	G
212	/ /78		Plato	9W, 51N	Saw fog on W. side of crater several times.									Klein	Cologne, Germany	6 R?				3*	G
213	3/21/79	0400?	Proclus	46E, 16N	Brilliant illumination, not by light of sun. (in dark, 1.5 dbefore NM!).					28.0:	252: +118S	+12.7: Mr 08 13		Barrett	England?			F p441	397	3*	B
214	11/ 1/79	0000?	E. of Picard	56E, 15N	Bright spot. (Fort admits he has several more of these records of LTP, but does not give them because they don't fall nr. Mars' opposition which he tho't was cause of them.)	O 16 17 N 14 04	O 31 20	61 06 61 27 53 58 54 02		16.4:	111: 13:S	+1.9: O 30 02			England?			F p442	400 167	3*	B
					Elevation rising N-S, with shading toward terminator.																
215	/ /79				Saw a large part of moon covered with a dark shadow--as dark as the Earth's shadow dur. an ecl. (confirmed.)									Russell, Hirst	England?			F p227	396	4	D
216	1/18/80	2000?	M. Nectaris	30:E,	Whole of sea was foggy. Fog extended into Fracastorius. Gruithuisen said seeing was unsatisfactory.	Ja 10 00 F 06 05	Ja 21 20	60 31 59 36 54 10 54 55:		7.5:	354: 24:R	-7.4: Ja 27 10		Gaudibert	France?		S=P	MB	110	0	G
217	1/23/80	2000?	Aristarchus	47W, 23N	Luminous light like a luminous cable or shining wall.	"	"	" " 56 05:		11.3:	50: 3:R	-3.4: Ja 27 10		Trouvelot	Meudon, France			F p443	111	3	B
218	11/ 6/80	2000?				N 04 20 D 03 02	N 20 18	60 31 61 06 54 04 59 57:		4.5:	320:	-9.6: N 16 21						M		0	
219	/ /80:		E. of Picard	56E, 15N	Variations in white spot. @2/3 diam. of Picard is a shallow ring-somewhat like Linné.									Noble, Goodacre, Gaudibert	England, England, France?	4 R?			112	5	B
220	1/13/81	2000?	Marius	51W, 12N	Speck of light in crater.	Ja 01 00 Ja 28 16	Ja 14 12	61 12 53 57 54 00:		13.3:	66: 15:R	-1.7: Ja 15 12		Williams	England?	6.5 L		F p443	113	3	B
221	2/ 3/81	1900(LT) 1800(UT	Aristarchus	47W, 23N	Very bright 8th mag. star, with pulsations!	Ja 28 16 F 25 22	F 10 01	61 12 60 27 54 03 57 22		4.7	330 -76R	-10.0 F 13 19		"Gamma" (psuedonym)	Germany?			MBMW	114	3*	B, G
222	5/ 4/81	2000?	Eudoxus	16E, 45N	Unexplained light in crater.	Ap 20 12 My 17 08	My 05 08	59 25 60 04 54 12 54 13:		6.4:	342: 2:R	-9.1: My 13 22		Trouvelot	Meudon, France			F p443	111 p213	3	B
223	7/ 4/81	0030	Limb North?	90W?	2 pyramidal protuberances on upperlimb (dark?). Points were darker than rest of moon's face then slowly faded away (atm? moon ver low).	Je 14.5 Jy 12 02	Je 29.6	60 50: 61 18 53 58: 55 18:		7.4	352 -98:R	-7.6 Jy 11 14		several	Lebanon, Connecticut	naked eye	alt. @ 10°		115	5	D
224	8/ 6,/81 7	0000?	Aristarchus, Schroter's V, Herodotus	47W, 23N 48W, 24N 48W, 22N	Whole region between these features appeared in strong violet light as if covered by a fog spreading further on 7th. Examined others around & none showed effect. Intensity not altered if Aris. placed out of view.	Jy 12 02 Au 09 11	Jy 26 07	61 18 61 20 53 57 60 26:		11.7, 12.7:	51: 3:R, 63: 15:R	-2.9:, -1.9: Au 09 21		Klein	Cologne, Germany	6 R, 5 L?		MB	116 47 p 63	4*	V, G
225	9/27/81 9/28/81	1900? (S. Africa 0300? (Arizona)			Comet-like object pulling across moon. (seen by obs. in S. Af. & Ariz. ! Could not have been same time but date given -27th).					4.3, 4.6:	323:, 325:	-9.7, -9.4: D 07 14		Day, Marokwic	Prescott, Arizona South Africa			C1	188	5	D

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Dates of Perigee	Date of Apogee	Horizontal Parallax	Duration	Age	Φ	Colon. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref. Wt.	Phenom. Type
	m d y	h m		λ , β		m d h	m d h	π_p π_a π		d	d	°	m d h	K_p, ΣK_p			Ap K Pw				
								1800 A.D.													
226	12/ 5/81	1709	Aristarchus	47W, 23N	Dur. ecl. it was a white spot in the coppery disk & cnt'd so. (normal appear. in ecl. ?)	N 25 15 D 23 05	D 11 10	59 33 60 28 54 10 56 18	1h ?	14.0	.29 .37	90 43R	0.0 D 05 17		Johnson				MB	117 0	B
227	1/29/82	1700- 1730	Eudoxus	16E, 45N	Unusual shadow	Ja 20 13 F 18 01	F 04 11	61 14 61 28 53 57 55 18	1/2h	10.0	.32	39 55R	-3.6 F 03 06						MBMW	118 2*	D, G
228	2/25,/82 27	2030- 2045, 1830- 1930	"	" "	Unusual shadow on 27th. on 25th shadow was normal.	F 18 01 Mr 18 12	Mr 03 11	61 28 58 37 61 09 53 57 54 48	1/4h, 1/2h	7.7, 9.7	.27 .27, .32 .34	9 25R, 33 49R	-7.2, -5.2 Mr 0501						"	" 3*	D, G
229	3/27/82	2000- 2200	Plato	9W, 51N	Milky appearance on floor in shadow. Sun rising. 1h later no trace. Filled whole floor except @1/4 diam. from E. wall which was quite black. Saw a curious phosphorescent glimmer at sunset (Ap 11 ?) (Birt, Neison, & Waugh saw obscur. mist or fog in it many times.)	Mr 18 12 Ap 15 17	Mr 30 21	61 07 60 22 54 03 54 48	1h	8.3	.40 .35	14 5R	-6.4 Ap 03 18		Williams	England	6.5 L			119 3*	G
230	4/11?/82	2100:	Plato	"	At sunset (date here calc. from #229) saw a curious phosphorescent glimmer in crater where he'd seen luminous milky appear. at sunrise.	"	"	" " 59 07:		23.4:	.82:	189: 0:S	+8.1: Ap 03 18		"	"	" "			" 3*	G
231	4/24/82	2130?- 2200?	Godin, Agrippa, M. Crisium (Webb's spot)	10E, 2N 11E, 4N 55E, 20N	Shadow anomalies-strange appearance. (he often noticed appear. that could only be haze.) Shadows blurred & oscillated. Shadows in Aristoteles were steady. E. of Agrippa shadows were misty as tho foggy which lifted & then became obscur. again. Intervals being 10 min. (not terr. atm.) Shadows never became clear whole time of obs. Also saw a white spot NW of [illegible] on Neison's map (Webb's spot.)	Ap 15 17 My 13 02	Ap 27 14	60 22 59 33 54 11 54 44:	1/2h?	7.1:	.41: .35:	355: 5:R 6:R 50:R	-8.0: My 03 08		Ridd	England?				121 3*	G, B
232	5/21,/82 22	2000?LT 0000UT? 0100?	C. Agarum	68E, 15N	Curved feathery mist bounding W. side of great valley divided longitud. by a faint dark line @160km long, 65-80km wide. In color & appear. strikingly diff. from other places & from anything else he had ever seen. Nothing seen on 20th (loc. time) (confirmed).	My 13 02 Je 07 07	My 25 08	59 35 59 23 54 14 55 47:	1h	4.7:	.40: .35:	326: 34:R	-10.8: Je 01 20		Jackson, et al	Delaware	6 L			122 5*	G, D
233	5/27/82	2000?	Plato	9W, 51N	Bright luminous ray nr. W. (ast. ?) wall on floor of crater (sunlight between peaks?).	"	"	" " 55 45		10.5:	.60:	32: 23:R	-4.5: Je 01 20				10 L		M	0	B
234	7/17-/82 18	0000?	C. Agarum	68E, 15N	Similar misty aspect as seen on My22 (#232) but even greater -to extent of mt. ranges it covered. Absent Jy 20, 21.	Jy 04 01 Au 01 01	Jy 19 20	60 05 60 54 54 05 54 19:		2.7:	.60: .58:	300: 8:R	-12.6: Jy 30 14		Jackson	Delaware	6 L			122 3*	G
235	11/ 7/82	0900	E. limb	90E,	Dark limb-line of light around it-attributed to an atm. -well seen, equally bright thruout length. (old moon in new moon's arms ?)	O 25 05 N 22 07	N 06 06	60 02 54 05 54 09		26.1	.47	231 141S	+11.8 O 26 14		Hopkins	E. U. S. ?			MBMW	123 1	B
236	3/12/83	2000	Taruntius & vicinity	46E, 5N	Obscuring med., apparently a fog @ mid crescent-S. of M. Cris. to N. M. Fecund. Large extent @ 225km^2 (100mi^2). Definition poorest at Taruntius-unmistakable variations in sharpness of its shadows.	Mr 09.2 Ap 07.2	Mr 24.1	61 15 61 24 53 58 58 24	1h	3.6	.12	319 3R	-10.8 Mr 23 18		Davies	Liverpool England	? 3 R 40X			124 3*	G
237	3/12/83	2000	W. limb	90W,	Line of light-well seen (similar to #235 except opp. phase).	"	"	" " "		"	"	319 131R	"		Hopkins	E. U. S. ?			MBMW	123 1	B
238	5/ /83		M. Crisium	68:E, 15N	Light mist or cloud at edge.										Jackson	Delaware	6 L		"	78 3*	G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Dates of Perigee	Date of Apogee	Horizontal Parallax	Duration	Age	Φ	Colon. Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom Type
	m d y	h m		λ , β		m d h	m d h	π_p π_a π		d	d	°	m d h	K_p ΣK_p			Ap K Pw					
								1800 A.D.														
239	11/ 4/83	2300 ?	W. limb	90W,	Lunar aurorae on dark limb-saw misty-like light in dark part, not like earthshine-seen repeatedly by him & others in Nov., Dec. & Mr. 29, 30, 1884. Displays on moon similar to atm. effects on earth (Aurora?)	O 16 17 N 14 05	O 30 21	61 22 61 23 53 58 55 08:		5.0:	.62 .69:	326: -124:R	-9.7: N 14 16		Heywood, et al	Westville, Ohio	2 R, 60X		F p443	102 p121	4*	G
240	11/ 5/83	1800:	Aristarchus	47W, 23N	Very bright-7th-8th mag. star (in dark part).	N 14 05 D 12 16	N 27 01	61 23 55 25 60 50 53 59 54 43		5.7:	.65: .72:	334: 73:R	-9.0: N 14 16		"R" (pseudonym)	Germany?			MBMW	125	3	B
241	2/ 5/84	2000 ?	Kepler	37W, 7N	An illumination.	F 03.5 F 28.5	F 22.6	58 54:		8.6:	.09:	20: -17:R	-5.4: F 11 05		Morales	France?			F p443	126	1	B
242	3/29,/84 30	2300 ?	W. limb	90W,	Saw a misty light on dark limb (similar to #239) Had narrowed down on 30th. (old moon in new moon's arms?).	Mr 29 01 Ap 26 09	Ap 13 19	60 34 61 19 54 06 60 29:		2.8:, 3.8:	.04: .05:	308: -142:R	-11.5: Ap 10 12		Heywood	Westville, Ohio	2 R		F	102 p121	1	G, B
243	9/16/84	0930- 1000			Unusually bright glow covering dark part, nearly uniform. Tho't it was electric because it was too bright for earthshine. It obscured features.	S 10 18 O 07 14	S 25 18	59 21 60 06 54 13 58 07	1/2h	26.6	.17 .23	232	+10.9 S 05 11		"	"	" "		"	102 p252	1	B, G
244	10/ 4/84	2203	Tycho	11W, 42S	Like a star of 2nd mag. during eclipse.	"	"	" " 59 04		15.5	.92 .90	90 79R	0.0 O 04 22		Parsehian	England?			MB	127	5	B
245	10/ 4/84	2200			Peaks were visible as brilliant pts. with slight red aureoles dur. ecl. (confirm. of #244?)	"	"	" " "		"	"	90	"		Bye	Brussels, Belgium			"	128	5	B, R
246	11/29/84	1900- 2100	Aristarchus	47W, 23N	Nebulous at center, elsewhere features well-defined.	N 04 04 D 02 15	N 19 14	60 59 61 28 53 56 59 48	2h	12.1	.84 .90	51 4R	-3.0 D 02 19		Hislop	England?			MBMW	129	3*	G
247	2/19/85	1900- 2000	Hercules	36E, 47N	Small crater (in it?) was dull red with vivid contrast.	Ja 29 02 F 25 24	F 10 00	60.8 59.8 54.5 58 16	1h	4.7	.80	328 4R	-9.4 Mr 01 04		Gray	England?			P, F	111 p227	3*	R
248	2/21,/85 22	2300 ? 2330 ?	Cassini	4E, 40N	Red patches in crater. Reddish smoke or mist. Says several others had seen a star-like pt. there that night. Saw definite light looking like Saturn on 22nd.	"	"	" " 59 07		6.9:, 7.9:	.87: .90:	355: -1:R 7: 11:R	-7.2: Mr 01 04		Knopp	Paysandu, Uruguay			P, F p443	"	4*	R, G
249	5/11/86	2000			2 lights on moon-brighter than any others dur. similar circumstances. had color-never saw before. ruled out chrom. aberr.	My 11 00 Je 05 23	My 24 23	59 17 59 49 54 15 59 15		7.7	.05	9	-6.3 My 18 02		Fauchier	Marseilles, France		S=G, alt. high	F p443	130	3*	B, R?
250	6/10/86	2100 ?	Aristarchus	47W, 23N	Star-like light. (ref. in MBMW is wrong = 131 here).	Je 05 23 Jy 03 17	Je 21 17	59 49 58 34 60 37 54 10 58 21 58 24:		8.3:	.17: .19:	19: 28:R	-5.8: Je 16 14		Tempel	Germany			MBMW	131	4	B
251	9/ 6/86	1900 ?	Plato	9W, 51N	Streak of light on dark floor of crater in shadow. (sunlight between peaks on wall?)	Au 29.2 S 26.3	S 11.1	61 23: 61 02: 54 00 55 06:		8.2:	.30:	16: 7;R	-6.7: S 13 11		Valderama	Italy?			"	132	0	B
252	10/16/86	2200	"	" "	Unusual phenomena? (drawing)	S 26.3 O 24.3	O 08.3	61 02: 60 18: 54 06 56 48:		19.1	.74	137 52S	+3.8 O 13 03		Lihou	France?	4 100X			132 p69	1	B?
253	11/14/86	2145	"	" "	Brilliant band N-S, area marked G in NE was only slightly visible, poorly defined. Drawing (there are rays on floor).	N 21 07 D 16 00	N 05 18	59 25 59 23 54 13 57 49		18.6	.79	129 60S	+3.1 N 11 19		"	"	" "			130 p69	3	B, G
254	2/ 1/87	1800	"	12W, "	Ill-defined shadow of peaks of W. border-in contrast to sharpness of mts. outside it. Never seen before. Such phenomena occur on floor, but never on ramparts. (Drawing).	Ja 12 06 F 09 12	Ja 28 07	60 16 61 05 54 03 55 35		8.2	.74	5 -7R	-6.7 F 08 10		Elger	England				130 p209	4*	G
255	2/ 2/87	2000 ?	LaHire	25W, 26N	Intense yellow streak that cast shadows around neighboring features.	"	"	" " 56 25:		9.3:	.76:	17: -8:R	-5.7 F 08 10		Klein	Cologne, Germany	6 R		MBMW	133	4*	R, G
256	11/23/87	2000 ?	Plato	9W, 51N	Luminous triangle on floor. Klein says it was sunlight effect. (but similar to Klein's own obs., #199. Fort says never seen before nor since).	N 14 05 D 12 10	N 26 09	61 03 60 14 54 04 54 33:		8.5:	.30:	15: 6:R	-6.5: N 30 08		de Speissens	France?			F p465	134	0	B
257	7/15/88	2200 ?	S. edge of Alps Prom. Agassiz?	6:E, 32N	Lunar volcano. 1st mag. star on dark side. Yellow light tinged with red from refractor's secondary spect. (facet glint? or peak catching sun before others? Hunt saw similar phenomenon in 1863).	Je 22 00 Jy 19 17	Jy 04 00	60 37 59 48 54 08 58 55:		6.6:	.86:	353: -1:R	-7.4: Jy 23 06		Holden	England?			MBMW	135	1	B, R

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Dates of Perigee	Date of Apogee	Horizontal Parallax	Duration	Age	φ	Colon. Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	See-ing	Inform. Source	App. Ref.	Wt.	Phenom Type
	m d y	h m		λ ° φ		m d h	m d h	πp " πa " π' "		d		°	M d h	K_p ΣK_p			Ap. K Pix					
								1800 A.D.														
258	11/23/88 87?	1615-1700			A triangular patch of light. (time in MBMW wrong ?moonrise was at 1830h If yr. =1887, age =8.8 d &time ok. must be same obs. as #256, note similarity of names also & ref. date).	N 04 15 D 03 04	N 19 04	61 20 61 26 53 57 55 02	3/4h	19.7	.67	213:	+5.1 N 16 15		Von Speissen & others	Berlin? Germany	3.5 R 180		MBMW	135	1	B
259	3/30/89	0500?	Copernicus	20W, 10N	Black spot in center--seen for 1st time. (date wrong ?age =28 d & Copernicus in dark).	Mr 21 13 Ap 18 02	Ap 06 04	59 33 60 24 54 11 56 43:		28.3:	.34:	254: +54:S	+12.7 Mr 17 12		Gaudibert	France?	4 R?		F p466		3*	D
260	3/30/89	"	Plinius	24E, 15N	New black spot. (seen again Sept. see # 265)	"	"	" " "		"	"	254: +98S	"		"	"	"		"		1	D
261	5/11/89	2200?	Gassendi	40W, 16S	Ink black spot on rampart. Not seen before or at next lunation, or ever again.	Ap 18 02 My 16 07	My 03 20	60 24 61 05 54 04 58 40:		11.8	.86	4 6: 6:R	-3.4: My 15 07								3*	D
262	6/ 6/89	2200	Plato B&D	10W, 48N	2 extremely bright spots.	My 16 07 Je 12.2	My 30.5	61 05 61 54 53 57: 57 42:		8.2	.77:	1 -9R	-6.7 Je 13 14		Lade	France?	8 R		MBMW	138	2	B
263	7/12/89	2052-2100	Aristarchus	47W, 23N	Brilliance in surrounding gloom was striking, dur. ecl.	Jy 12 02 Au 09 07	Jy 24 16	61 12 60 33 54 02 61 11	8m	14.5	.02 .03	90 43R	0.0 Jy 12 21		Krüger	Gotha? Kiel? Germany	GL 733×?		MB	139	2	B
264	9/ 4/89	0230 - 0300	Alpetragius	5W, 15S	Shadow of CP diffused &pale. Entire inside of crater seemed filled with haze or smoke. Shad. of E. wall was black & sharp. CP &floor seen thru haze. No other craters showed this appear. (date&time rep't =Sep3, 1830L, T)	Au 09 07 S 06 01	Au 21 06	60 33 59 44 54 10 59 28	1/2h	8.4	.87 .95	16 9R	-5.6 S 09 14		E. E. Barnard	Lick Obser. California	36 R150 700X		P, Mo	140	4*	G
265	9/13/89	2300?	Plinius	24E, 15N	Unusual black spot with intensely white 4" border over CP. Normal aspect is 2 craters. (#260 says that Gaudibert saw same thing in Sep. -confirm.)	S 06 01 O 01 16	S 18 01	59 44 59 14 54 16 55 30:		18.4:	.33	127: 29:S	+4.4: S 09 14		Thury	Geneva, Switzerland			F p446	136	3*	D, B
266	10/ 3/89 4	0300 - 0345	Alpetragius	5W, 15S	Shadow of CP only very slightly penumbral & entire interior hazy & foggy. Same as on Sep 3rd. Shad. of E. wall is not black. Suspected warmth of color (reddish) in the interior of the crater. Clear on Oct. 2, S=4	O 01 16 O 27 17	O 15 21	59 14 59 51 54 15 59 03		8.0, 9.0	.11 .15; .14 .18	14 9 R, 26 21:R	-5.9, -4.9 O 09 02		E. E. Barnard	Lick Obs. California	36 R150 700X	S=5		140	4*	G, R
267	10/ 3/90	2200	Posidonius	30E, 32N	Unusual shadow. (moon low?) (crater in dark part-term. 2° past west wall).	S 26 16 O 24 10	O 08 14	60 36 59 43 54 08 55 50		19.6	.27	156 + 6S	+5.4 S 28 13		Meller	Germany?			MBMW	141	3	G
268	5/23/91	1836-1915	Aristarchus & vicinity	47W, 23N	1/2h before totality end, region of crater & just N of it became conspicuous & increased in brightness from then on. (edge of shad. ?-normal?).	My 05 09 My 31 21	My 17 05	59 35 56 38 59 21 54 13 56 55	1/2h	15.4	.73 .70	90 43R	0.0 My 23 18		Jackson	Sheffield, England	6 R		MB	142	0	B
269	9/16/91	1900:	Schroter's Valley & vic.	48W, 24N	Dense clouds of vapor apparently rising from its bottom & pouring over its SW wall toward Herod. He says no activity till day after sunrise &ceases a few days before sunset. (Part of an extensive Observing of only a few features under all aspects of lighting. Drawings & photos.)	S 16.7 O 15.3	S 30.5	61 29 61 13 53 55 61 22:		13.5:	.00:	76 28R	-1.4: S 18 05		Pickering	Arequipa, Peru	12 L?			143	1	G
270	9/17/91	1800:	"	"	Variations in vapor column. Crater D covered. (there are rays here--high sun effect on them?) Drawings. (time est. fr. given colongitude).	"	"	" " 61 24		14.5:	.04:	89 42 R	-0.4: S 18 05		"	"	"			"	1	G
271	9/18/91	2100	"	"	Variations in vapor column. Drawings. (time est. fr. given colongitude).	"	"	" " 61 21		15.5	.07	102 126S	+0.6 S 18 05		"	"	"			"	1	G
272	9/23/91	2200:	"	"	Variations in vapor col. drawings. (time est. fr. given col.)	"	"	" " 57 30:		20.5:	.26:	166 61S	+5.7: S 18 05		"	"	"			"	1	G
273	9/25/91	2000:	"	"	Variations in vapor col. (time calc. fr. given colongitude).	"	"	" " 56 18:		22.6:	.32:	190 38S	+7.6: S 18 05		"	"	"			"	1	G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Dates of Perigee	Date of Apogee	Horizontal Parallax	Duration	Age	φ	Colon. Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	See-ing	Inform. Source	App. Ref.	Wt.	Phenom Type
	m d y	h m		λ, β		m d h	m d h	π_p π_e π		d	°	°	d m d h	K_p ΣK_p			Ap K Pw					
								1800 A.D.														
274	10/14/91	1800:	Schroter's Valley & vic.	48W, 24N	Variations of vapor col. & visibility of craterlets A, C, F (plate B) in early period at Peru. Direction of vaporjet toward F varied but was always continuous. Later, in Mass. There was a breakin it. D was quiescent in early period. (due to change in telescope & atm. ? time est. fr. given col).	S 16.7: O 15.3,	S 30.5	61 29 61 13 53 55 61 09		11.8	.99	56 8R	-2.7 O 17 14		Pickering	Arequipa, Peru	12 L?			143	3	G
275	11/ 7/91	1900?	Aristarchus	47W, 23N	Very distinct luminous pt. (in dark).	O 16 17 N 14 01	O 29 05	61 11 60 30 54 01 57 31		6.1:	.74: .80:	342:: -65 R	-8.2: N 16 00		d'Adjuda	Lisbon, Portugal			F p466	144	3	B
276	4/ 1/92	0400-0430	Thales	49E, 63N	Filled with pale luminous haze tho all surrounding features were sharp & normal. Walls also hazy. (Drawing).	Mr 28 22 Ap 26 09	Ap 11 23	61 35 61 25 54 00 59 01	1h	3.7	.13	319 8R	-11.1 Ap 12 06		E. E. Barnard	Lick Obs. California	36 R?	S=4/5	P	140	4*	G
277	5/10/92	1900:	Schroter's Valley &vic.	48W, 24N	Variations in vapor col. Drawings. (time calc. fr. given col.)	Ap 26 09 My 24 17	My 09 05	61 18 60 46 54 00 54 09: " " " 54 22		14.0: 15.1	.51: .55	81 33 R 90 0 R	-1.0: My 11 23 0.0 My 11 23		Pickering	Arequipa, Peru	12 L?		MBMW	143 148	1 0	G D
278	5/11/92	2253	Cusps		Dur. partial ecl. extension of earth's shad. beyond the cusps.																	
279	1/30/93	1700:	Schroter's Valley &vic.	48W, 24N	Variations in vapor col. & visibility of craterlets A, C, F, sunrise +2d. (time est. fr. given colongitude).	Ja 28 02 F 21 21	F 09 04	59 32 54 14 58 52: 59 19		12.9:	.11:	74 26 R	-1.2: F 01 02		"	"	" "			143	3	G
280	4/ 1/93	2200?			Shaft of light projecting fr. moon. (not LTP?).	Mr 20 19 Ap 17 22	Mr 09 00	60 07 60 55 54 13 54 55:		14.7:	.43	97:	+0.6: Ap 01 07		deMoraes	Azores			F p466		0	B
281	9/25/93	2100?			Shaft of light projecting fr. moon. (not LTP?).	S 04 10 S 29 16	S 17 14	59 19 59 39 54 14 58 28:		15.5:	.85:	90:	0.0: S 25 21		Gaboreau	Paris, France			"	146	0	B
282	2/23/94	0000?	Daniell & N. wall of Posidonius	30E, 35N 30E, 32N	Strong, brownish-red coppery hue.	F 17 21 Mr 17 05	Mr 01 16	60 23 59 30 54 09 57 38:		17.1:	.19:	125: 25: S	+2.9: F 20 02		Krieger	Germany			MBMW	147	4*	R
283	3/11/95	0342	Aristarchus	47W, 23N	Glowing with brilliance, never seen before. Attracted everyones attn. Extended its radiance to a neighbor crater (tail to Herod. ?) all thru totality. At following ecl. (Sep. 3, '95) it was inconspicuous. (seen by several BAA members also).	Mr 10 01 Ap 07 05	Mr 22 07	61 05 60 17 54 03 60 53		14.5	.04	90 43 R	0.0 Mr 11 04		Swift, et al, Elger, et al.	Lowell obs. Flagstaff, AZ England	?		Bo pc	148	5*	B
284	5/ 2/95 ?	2045, 2345	Plato	9W, 51N	Streak of light (Brenner) bright parallel bands in center (Fauth) (indep. confirmation ?).	Ap 07 05 My 04 10	Ap 19 01	60 17 59 28 54 11 59 21	3h ?	17.8, 18.0	.94	8 -1 R	-6.2 My 09 00		Brenner, Fauth	Germany ?			MBMW		5*	B
285	9/ 8/95	0600?	upper (S?) limb	0:, 90S	Pale blue segment on upper limb. (date given is 7th loc. time ?if so =8th UT).	Au 21.7: S 18.07	S 03.5:	61 17		18.8:	.63:	136: 44: S	+4.0: S 04 06		Swift	Lowell Obs. ? Flagstaff, AZ			Bo pc	371	3*	V
286	9/25/95	2000?			Shaft of light. (same obs. as 281 ? Note same day & obser.)	S 18 07 O 16 16	O 01 02	61 17 60 45 54 02 55 34		7.0:	.26:	1:	-8.2: O 03 23		Gaboreau	Paris, France			MBMW	146	0	B
287	/ /95-96		Aristarchus	47W, 23N	Both, several times (dates not given) saw a faint bluish mist on inner W. wall soon after SR. Not a secondary spectrum. (date in MBMW=1931 but this is date of pub. of book)					@11:		50: 3: R			Goodacre, Molesworth	Crouch End, England, Trincomali, Ceylon	12 L, 12 L			149	3*	G, V
288	/ /98		Macrobius	45E, 21N	Penumbral fringe to shadow.										Goodacre	Crouch End, England	12 L			382	3	G
289	6/14/97	2300	Schroter's Valley &vic.	48W, 24N	Variations in vapor column. Break in col. toward F & eruption of crater D. 3.4d after sunrise.	Je 13 16 Jy 11 17	Je 25 22	61 00 60 15 54 03 60 44		14.3	.05	91 44 R	+0.1 Je 14 21		Pickering	Cambridge, Mass.	15 ? R			143	3	G
290	9/21/97	2300	Aristarchus	47 W, 23N	Glimmering streaks beneath both E & W walls & c.p. dimly discernible tho whole crater filled with shadow.	S 01 22 S 29 00	S 17 04	60 15 54 11 55 35		24.9	.71	216 11 S	+10.9 S 11 02		Molesworth	Trincomali, Ceylon	12 L			149	3*	G, B
291	10/ 8/97	2200:	Schroter's Valley &vic.	48W, 24N	Variations in vapor col. Till now, C was largest compared with D&E& most conspicuous. 1.3 d after sunrise. Drawing. (time est. fr. given colon.).	S 29 00 O 27 03	O 14 22	60 15 61 03 54 03 55 47:		12.2	.35	65 17 R	-1.9 O 10 17		Pickering	Cambridge, Mass.	15 ? R			143	3*	G
292	10/10/97	1900:	"	"	Variations in vapor col. change in direction of cloud rising from Fis marked. (time est. fr. given colon.).	"	"	" " 55 01:		14.3:	.42	91 43 R	+0.1: O 10 17		"	"	"			"	3	G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Dates of Perigee	Date of Apogee	Horizontal Parallax	Duration	Age	ϕ	Colon. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	See-ing	Inform Source	App. Ref.	Wt.	Phenom Type
	m d y	h m		λ ° β °		m d h	m d h	π_p π_a π		d	w. d	°	m d h	$K_p \Sigma K_p$			Ap K Pw					
								1800 A.D.														
293	10/13/97	2000	Schroter's Valley & vic.	48 W., 24N	Variations in vapor column.	S 29 00 O 27 03	O 14 22	60 15 61 03 54 03 54 08		17.3	.53	126 102S	+3.1 O10 17		Pickering	Cambridge, Mass.	15 R?			143	1	G
294	10/14/97	0050	W. limb	90W,	Refractive displacement of lunar atm. at bright limb was at most 0.4". (time is for occultation of Alcyone of Pleiades	"	"	" " 54 07		17.5	.49 .53	127 163S	+3.3 O 10 17		"	"	"			"	3	G
295	10/15/97	0500:	Schroter's Valley & vic.	48W, 24N	Variations in vapor col. Depends on alt. of sun & can be seen in a 6-in "scope. (time est. from given colongitude).	"	"	" " 54 42:		18.7:	.58:	153 75S	+4.5: O 10 17		"	"	"			"	1	G
296	12/ 9/97	2300?	W. Humboldt	75E, 27S	Shadow anomaly. Chocolate penumbral shade edging black shadow on E. wall.	N 24 14 D 23 03	D 08 11	61.4 61.25 53.95 54 02:		15.6:	.56:	100: 5:S	+0.8: D 09 05		Goodacre	Crouch End, England	12 L		P	150	3*	G
297	1/ 8/98	0000-0100	Tycho region	11:W, 42S	Mid-ecl. shadow so dense details of surface disappeared except bright ray SSW was clearly visible. (unusual for that ray to remain when usually the one toward Kepler & Aris. are the ones to stand out?)	D 23 03 Ja 20 12	Ja 04 16	61 25 54 25 60 38 54 00 54 33	>1/2h	15.2	.63 .58	90 79R	0.0 Ja 08 00		Chevremont	France?			MB	151	0	B
298	4/ 6/98	2300:	Schroter's Valley &vic.	48W, 24N	Variations in vapor col. Crater E now most conspicuous instead of C which is now least conspic., but not covered with vapor. (in drawing 2 gaps show, time est. fr. given col.)	Mr 14.5 Ap 09.5	Mr 28.5	59 14 59 56 54 13 58 54:		15.7:	.91:	98 50R	+0.2: Ja 06 21		Pickering	Cambridge, Mass.	15 R?			143	3*	C
299	4/ 7/98	2230	"	"	Variations in vapor col. Lge. gap in main column near edge of C. Gap not previously seen, but fine lines crossing it had. E is still most conspic. (time est. fr. col. given).	"	"	" " 59 30:		16.7:	.94:	111 117S	+1.2: Ja 06 21		"	"	"			"	3*	
300	4/ 9/98	0400:	"	"	Variations in vapor col. Break in main col. Similar to earlier, time est. fr. given col. Date given is 8th LT =9th UT).	"	"	" " 59 54:		17.9:	.98:	123 105S	+2.4: Ja 06 21		"	"	"			"	2	C
301	7/ 3/98	2145	Proclus	46E, 16N	1/2h after mid-ecl., crater shone with reddish light in shadow.	Jy 03 14 Jy 31 22	Jy 16 18	61 22 61 22 60.95 53 58 61 21	min?	14.7	.01 .03	90 136R	0.0 Jy 03 21		Moye	France?			MB	151	2	B, R
302	12/27/98	2300-0000	Aristarchus	47W, 23N	Brilliant in ecl.	D 14 13 Ja 12 02	D 29 18	61 06 61.4 53 58 54 11	1h	14.5	.45 .47	90 43R	0.0 D 28 00		Stuyvaert	France?			"	153	1	B
303	12/27-/98 28	0000-0100	Linné, E. of Webb	12E, 27N 61E, 2S	Pickering suspected or was uncertain about change in size dur. ecl. & also dark area E. of Webb. Douglass meas. Linné as enlarged by 0.5" for @30m after it re-entered sunlight. (indep. confirm.)	"	"	" " "	1/2h	"	"	90 78S, 29S	"		Pickering, Douglass	Camb. Mass. Ariz.?	12 L			152	5	B, D
304	12/31/98	2000?	Macrobius	45E, 21N	Interior nearly filled with shadow at sunset. Inner E. wall very bright-a distinct penumbral fringe to black shad. cast on it from W. wall. Seen best using high powers. (Firsoff & MBMW give date as just 1896 but must be wrong-phase is wrong-see app. ref.)	"	"	" " 54 06		18.3:	.58: .62:	132: 3:S	+3.8: D 28 00		Goodacre	Crouch End, England	12 L			154	4*	D
305	8/29/99	1530-1615	Copernicus	29W, 9N	Noted that inner parts of crater glowed in weak phosphorescent light tho not directly lighted by sun. Tho't probably due to multiple refl. from lighted walls. Bullialdus & Reinhold didn't show it.					22.6		192: 8:S	+7.9: Au 21 05		Fauth	Landstuhl, Germany?	6 R		MBMW	379	0	G, B
306	/ /99				Bright area on lunar surface.										Day	Prescott, Arizona			M		1	B
								1900 A.D.														
307	11/26/00	1900?			Suspicious obscuring phenom on dark plain(mare).					4.5:		325:	-9.6: D 06 10			Europe?			C1		2	G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colon. Term Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	See-ing	Inform Source	App. Ref	Wt.	Phenom Type
	m d y	h m		λ φ		m d h	m d h	π_p π_a π		d		°	m d h	K_p ΣK_p			Ap K Pw					
								1900 A.D.														
308	/ /00:		Plato	9W, 51N	Mist or fog covered floor. (In his book The Moon, p. 40 has drawings for 1870, 1881 & 1892 showing visibility of craters which varied between each period. Some easily vis. in 1870 not seen at all in 1881 with larger 'scope & better seeing).										Pickering	Cambridge, or Jamaica?	15 R? or 12 L?		P	155	3*	G
309	10/25/01	2200?	Marius	51W, 12N	No. of light streaks noted on floor. Usually none are seen.	S 29 18 O 28 03	O 15 07	60 47 61 20 53 59 60 37:		13.4:	.95: .94:	68: 17:R	-1.7: O 27 15		Bolton	Leeds, England	4.5 R		MB	156	2*	B
310	11/25-/01? 26	2300			Dur. lun. ecl. (mid-ecl. at 0118 on 26th) a bright area seen on moon. Another(?) obser. saw an obj. like a fiery comet leave the moon. (Date given by Middlehurst was 1900 but must be wrong-not FM then. FM in 1901 but no ecl. Partial ecl. on 10/27/01 at 0315. Ref. by M is wrong = 157).	N 05 16 D 03 20	N 17 19	60 58 60 07 54 04 57 16		14.7	.76	90	0.0 N 26 01		Bessuoua	France?			M	157	1	B
311	4/22/02	2200:	Aristarchus	47W, 23N	Luminescence during total lunar eclipse.	Ap 10 13 My 08 19	Ap 26 07	60 31 61 09 54 03 54 26	1h?	14.4	.44	90 43R	0.0 Ap 22 00		Zlatinskiy	Russia	3 R?		F, C	387	2	B
312	8/13/02	0050	nr. Lambert	21W, 25N	Brilliant star-like pt. on dark side of term. mag. 3-4, round spurious disk, had an interference or diffraction ring. Resolved into a very brilliant spot as term. neared it. (too far fr. term. to be sunlit pk.? Given as Aug. 12 in MB).	Au 01 18 Au 29 07	Au 13 16	60 27 59 38 54 11 54 24	2h?	9.2	.48 .41	20 - 1R	-6.3 Au 19 06		Jones	Philadelphia, Penn.	6 L250X		MB	158	1	B, G
313	10/16/02	-1810?	Thaetetus	6E, 36N	Unmistakeable white cloud formed close to it.	S 23 13 O 20 02	O 08 06	59.3 60 02 54 12 58 54		15.0:	.89:	79: 73:R	-1.0: O 17 06		Cherboneaux	Meudon, France	33 R		P	159	3*	G
314	10/17/02	0435- 0600			Dark band, no color, across center of moon dur. ecl. Copernicus brighter than Tycho, Aristarchus brightest of all. Drawing by Brink & Wilson at 1725(=0525UT)(Confirm. -- time given=16th at 1635-1800 =17th at 0435-0600 on present UT system).	"	"	" " 59 00:		15.6	.90	90	0.0 O 17 06		Swift, Brink Wilson	Marathon, NY Goodsell Obs Chamberlin Obs.	opera gl. field gl. 20 R 200X			158	5	D, B
315	3/ 3/03	1830	Aristarchus region	47W, 23N	Star-like pt., of light in dark (indep. confirm.?)	F 10 13 Mr 10 13	F 22 13	60.8 56 23 59 58 54 04 56 38		4.3	.77 .75	323 -84R	- 9..8 Mr 13 12		Rey	Marseilles, France.			F p495	160	5*	B
316	3/ 3/03	2000?	Sharp?	40W, 45N	Star-like pt. in dark part. Gray-blue marbling, glimmering, intermittent. (indep. confirm. of Rey?)	"	"	" " 57 30:		"	"	323: -77:R	-9.8 Mr 13 12		Gheury	London, England			F	160	5*	B, V, G
317	4/11/03	2344	Tycho? or Aristarchus?	12W, 42S 47W, 23N	Dur. ecl. bright extension of lunar (rays?) in shadow for 30m until mid-ecl.	Ap 05.8 My 01.8	Ap 19.0	59 18 59 42 54 13 56 54:	1/2h	14.0	.25	90 78R, 43R	0.0 Ap 12 00		Zlatinskiy	Russia	3 R 50-80X		F, C	387	2	B
318	8/ 1/04	0500?	Plato	9W, 51N	Bright hazy obj., 2" diam. on floor. Obs. before & after were normal.	Jy 15 04 Au 12 09	Jy 30 20	60.5 54 04 61 10 54 03 54 08		18.0:	.53: .58	132: 57:S	+3.8: Jy 27 10		Pickering	Tycho Mt., California			MB	161	4*	B, G
319	10/ 3/04	0100, 0400	"	"	Hodge(0000h) found no craters tho easily vis. on floor 2d before under high sun. Goodacre 3h later couldn't detect any craters on floor or light markings. Total or partial obsc. of crater floor confirmed by Elger(near sunset on Plato) (MBMW has 10/2/04 1300, 1600 =old time system).	S 09 19 O 08 06	S 23 06	61 06 53 59 57 48	3h	23.3	.85	188 1S	+8.5 S 24 18		Hodge, Klein, Elger, Goodacre	Highgate, Eng. Germany, Eng., Crouch End, Eng.	12 L, 8.5 L, 8.5L, 350X 12 L			p246	149 5*	G
320	2/19/05	1800- 1903	Aristarchus	47W, 23N	Shining in dark as a star (in eclipse).	Ja 23 18 F 21 00	F 08 20	60 15 60 42 61 02 54 04 60 53	1h	15.2	.98 .97	90 43R	0.0 F 19 19		Moye	Montpelier France					3	B
321	3/ 9/05	0000				F 21 00 Mr 21 11	Mr 08 07	61 02 61 26 53 58 53 59		2.8	.48 .58	301	-12.2 Mr 21 05						MB		0	
322	8/15/05	0339	Tycho	11W, 42S	Vis., even brilliant dur. ecl. (mid-ecl 0331).	Au 04 20 S 01 11	Au 20 13	59 44 55 38 60.5 54 09 55 23	1h	14.0	.35	90 79R	0.0 Au 15 04		Rey	Marseilles, France			"	162	1	B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee date	Horizontal Parallax	Duration	Age	φ	Colon. Term Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ β ° °		m d h	m d h	π_p π_e π		d	d	°	d m d h	K_p ΣK_p			Ap K Pw					
								1900 A. D.														
323	/ /05:		Appenine Mt	0-5W?, 20-24N?	Certain variable spots on curved ridge, which he attributed to clouds & snow deposits.										Pickering	Mandeville, Jamaica	6.5 L		G	163	3	G
324	3/ 6,06 7	2200?, 2200?	Plato	9W, 51N	Color (brightness?) greatly enhanced on both nites.	F 13.0 Mr. 12.0	F 28.0	59 24 56 30: 60 18 54 10 57 12:	1d?	11.8: 12.8:	.81:	43: 34:R	-3.9: Mr10 20		Fauth	Germany?	6 R			376	3	R?, B?
325	8/ 4/06	0030LT-0130"= 1230-1330UT	Aristarchus	47W, 23N	Shone conspicuously dur. ecl. (UT time is on new sys. mid-ecl at 1300UT).	Au 01 07 Au 27 10	Au 13 06	59 52 58 56 61 06 54 14 58 38	1h	14.0	.15 .14	90 43R	0.0 Au 04 18		Ward	England?			MB	164	1	B
326	/ /06		M. Humorum M. Serenitatis Lichtenberg Alphonsus	37W, 24S 20E, 25N 67W, 32N 4W, 13S											Flammarion Dubois	France				165	0	
327	1/22/07	2000?	Plato	9W, 51N	Glow of light part of crater.	Ja 13 02 F 10 07	Ja 25 06	61 03 54 38 60 11 54 04 54 26		8.6:	.44: .36:	16: 7:R	-6.8: Ja 29 14		Fauth	Germany?			MB	166	3*	B
328	1/24,/09 25	1930			Noted that the dark side of the moon glowed red. (special terr. atm. effect?).					2.7: 3.7:		306: >55R	-11.6: -10.6:		Nicoles, Krebs	France?				380	1	R
329	3/26/09	1915-2020	E. of Picard	56E, 15N	Bright spot. (feature is similar to Linné. Rays difficult to see till high sun). Hazy, ill-defined brighter in S. (Draw)	Mr 21 11 Ap 18 20	Ap 03 11	61 22 60 52 53 58 57 52		4.9:	.20:	334: 30:R	-9.6: Ap 05 20		Neate	England	4R, 170×		F p495	167	1	B
330	5/23/09	1800?	" " "	" "	Bright spot.	My 16 20 Je 12 16	My 28 17	60 05 59 22 56 12		4.2:	.28:	320: 16:R	-10.8 Je 04 01			"			"	167	1	B
331	/ /09		Mersenius	47W, 21S	Dawn effect--dimly-lit zone bordering shadows.					12:		49: 2:R			Eliot-Merlin	England?	8.5 L260×		P	168	3*	G
332	/ /09		Tycho	11W, 42S	Bright marks in shadow or shad. disappearing--false dawn. (peaks catching sunlight?)										Mellish	England?	8.5L300X		P p492	168	1	G, B
333	11/16-/10 17	2250-0010	Stofler	5E, 41S	Luminous pt. on moon dur. ecl. (mid-ecl. 0025) Others saw a meteor on moon from widely separated places.	N 17 02 D 15 16	N 30 19	61 25 53 57 61 24	1:h	14.9	.00 .00	90 95R	0.0 N 17 00		Albright	Edgeaston, England			F p495	169	3	B
334	1/27/12	2000LT 00007GT 28th	N. ? Cusp		Intensely black curved object 400X240km.	Ja 04 14 F 02 02	Ja 18 02	61 31 53 55 58 06	1h	8.5:	.83:	9:	-6.0: F 02 00		Harris	Philadelphia?, Pennsylvania	naked eye?		M	170	1	D
335	3/20/12	1900?	Leibnitz Mt.		Saw S. horn prolonged along Leibnitz mts. as a feeble line of light well into dark part.	Mr 01 09 Mr 28 21	Mr 13 05	60 26 59 34 54 10 57 01:		1.9:	.72:	336: 0R	-11.7: Ap 01 22		Franks		6 R			159 p111	1	B, G
336	4/ 1/12	2200-2300	Tycho	11W, 42S	Vis. like a bright spot standing out in the slate-gray shad. Only Tycho seen in ecl. (mid-ecl. at 2214).	Mr 28 21 Ap 22 22	Ap 10 01	59 34 59 20 54 15 58 37	1h?	14.0	.13 .16	90 79R	0.0 Ap 01 22		LeRoy	France?			MB	171	1	B
337	5/19/12	2050-2100	nr. Promon. LaPlace	25:W, 46:N	Small red glowing area noted on dark part.	My 19 17 Je 16 16	My 07 20	60 03 60 46 54 13 60 05:		2.8:	.00 .00	308: 77.R	-11.2 My 31 00		Valier	France?	4 R		MB	172	3	R, B
338	5/20/12	2100?	Leibnitz mts.		Glowing like a line of light into dark part.	"	"	" " 60 00:		3.9:	.03:	320: 0R	-10.2 My 31 00		Franks.		6 R		MBMW	173	1	B
339	5/23/12	1800?	Triesnecker rille	3E, 4N	Change in shape from representation of Brenner & Krieger not accountable by lighting conditions.	"	"	" " 58 50:		6.8:	.14:	2: 5:R	-7.3: My 31 00		Gordeenko	Russia			F, C	387	0	
340	6/17/12	2000?	cusps	90E, 90N 90S	Sharply outlined edges of new moon hazily extended in 25° band over unlit part. S. horn larger than N. one.	Je 16 16		60 51 60 40		2.5:	.04:	305: 25R	-11.7 Je 29 14		Stolyarenko	Russia			"	"	1	G, B
341	9/26/12	0300	Pico B	10W, 44N	Haze spreading from eastern end of crater. (MBMW gives 9/25/12 but it is 26th UT.)	S 09 18 O 07 19	S 21 20	60 48 60 02 54 07 55 07		14.9	.63 .59	85 75R	0.0 S 26 02		Pickering	Mandeville, Jamaica	6.5 L		MB	174	3*	G
342	1/15/13	0012	Eimmart	65E, 24N	Spreading apron of white material like a sea of cloud. Not seen again after this date. Crater had been brightest area on moon between it & limb--albedo of 9. On Aug. 5, albedo=6. His atlas shows it bright. It grew dull after this date. He gave co[illegible] as 11°, but FQ was at 1/15/13 at 14h.	D 25.& Ja 22 23	Ja 11 00	61 18 54 00 55 24		7.6	.67 .72	352 57R	-7.7 Ja 22 16		Pickering	Cambridge, Massachusetts	11R, 330×	S=6, 8	P	176	3*	G
343	3/22/13	1130-1230	Aristarchus?	47W, 23N	Dur. totality there remained vis. to the NW a red, luminous pt., not much larger than Mars & of the same color. (date & time in old system = 3/21/13 2330-0030).	Mr 21 12 Ap 18 17	Ap 02 20	61 06 60 21 54 12 61 06	1h	14.5	.02 .05	90 43R	0.0 Mr 22 12		Jackson	France?			MB	175	3	R, B
344	5/14/13	0100	Eimmart	65E, 24N	By this date crater was clear & at an albedo =5. Drawings compare Jan. 15 & Aug. 9, 1913.	Ap 18 17 My 14.5	Ap 28.8	60 23 59 32 54 10 59 24:		7.7	.98	6 71R	-6.3 My 20 07		Pickering	Mandeville, Jamaica	6.5 L		P		3	D

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colon., Term Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ, β		m d h	m d h	Π_p Π_a π ′ ″ ′ ″ ′ ″ 1900 A.D.		d	Π_d	°	m d h	Kp, ΣKp			Ap K Pw					
345	6/15/13	2200 ?	nr. South ? or J.Herschel?	54:W, 56:N or 40:W, 60:N	Saw a small, distinct reddish spot which became diffused into a patch as term. adv-anced on the plateau NE of the crater South. When the plateau was on the term. (Goodacre says the crater was J.Herscel for same date--2 different spots or misident. for one ?)	Je 10 04 Jy 07 00	Je 25 03	59 22 60.3 54 15 58 04:		11.1:	.23:	68: 14:R or 28:R	-2.7: Je 18 18		Maw	Surrey, England	6R, 8R			65 p163	3*	R, G
346	12/17-31/13 12/19-30/15		Plato	9W, 51N	Gradual decrease in albedo from 6.4-6.45 to 3.5-4 on scale of intensity of 10.										Markov	Russia			F, C	387	3*	D
347	/ /14		Triesnecker to Ukert	4-2E, 5-8N	Location of dark spots diff-erent than depicted by Lohr-mann.										Bochek	"			"	387	0	
348	/ /14		Hyginus	6E, 7N	Form of dark spots near it changes every month in diff-erent ways. Location does not agree with Madler, Lohrmann or Smith(Schmidt ?)										"	"			"	"	1	
349	1/31/15	2200 ?	Littrow	31E, 22N	6 to 7 spots arranged like a γ, first seen on this nite. (Kuiper atlas, Rect. 14-c shows spots in form of a 7 or a cap. gamma backwards, but not l.c. gamma).	Ja 12 14 F 07 13	Ja 24 09	59 53 59 13 54 14 57 32:		16.8:	.76:	95: 54:S	+0.8: Ja 31 06			England ?			F p519	177	0	B
350	4/ 3/15	2300 ?	Plato	9W, 51N	Appearance of bright spots that could even be seen in a 43mm(2-in) tube.	Ap 02 00 Ap 30 07	Ap 17 16	60 41 61 17 53 59		18.2:	.07:	218: 29:S	+2.8: Mr 31 06		Markov	Russia	2 R		F, C	387	2	B
351	4/21/15	1800 ?	South of Posidonius	29E, 29N	Noticed special occurrence S. of the large crater, which he took as evidence of water vapor.	"	"	" " 55 14:		7.2:	.69	350: 19:R	-7.9: Ap 29 14		Houdard	France ?			MB	178	3*	G
352	4/23/15	2000 ?	Clavius	12W, 58S	Narrow, straight beam of light from crater A to B.	"	"	" " 56 43 56 57		9.3:	.73 .77	16: 4:R	-5.8: Ap 29 14		Cook	England ?			MB	383	1	B
353	5/ /15		Linne	12E, 27N	Increased its brightness to 7 (on scale to 10) compared with Pickering's 5.5 in1897.										Markov	Russia			F, C	387	3*	B
354	/ /15 spring-summer		Plato	9W, 51N	One of the spots was barely vis. in spring, but albedo in-creased significantly in summer.										"	"			"	"	3*	B
355	June, Nov., Dec. 1915		"	"	One of the spots was bright in June, but weakened in Nov.-Dec. For a short time anot-her greatly changed its intensity										"	"			"	"	3*	D, B ?
356	7/ 3/15	0000 ?	Triesnecker rille	3E, 4N	Several spots changed their shapes compared with Gor-deenko's depiction on 5/23/12 (see # 339) which cannot be ex-plained by light variations.	Je 26 02 Jy 24 05	Jy 08 11	61 04 60 22 54 02 56 16		20.3:	.25:	254: 77:S	+5.8: Je 27 04		"	"			"	"	3*	
357	7/24/15	2200 ?	W. limb	30W,	When φ Strettsa (?) approa-ched edge but still separated, the star began to stretch in a belt 3X its own length & then instantly disappeared. Prob-ably no significant atm. or vapors. (similar to other re-ports of fading occult. Gives limb as E. but that is in ast. convention.)	Jy 24 05 Au 20 14	Au 05 03	60 22 59 33 54 10 60 13		12.5:	.03	68: 21:R	-1.6: Jy 26 12		Barabaschev	"			"	"	2	B
358	12/11/15	1000 ?	N. shore M. Crisium	60:E, 24N	Star-like pt. on N. shore of mare. (Eimmart ?) Particu-larly bright spot. Tho't it was sunlight from rim of sm. crat.	D 07 01 Ja 04 14	D 21 01	61 23 61 19 53 58 59 04:		4.7:	.17	332 32:R	-10.1 D 21 13		Thomas	Glenorchy, Tasmania			F p519	179	0	B
359	12/ 15		Aristillus	1E, 34N	Black-edged streak from cen-ter to wall. New formation, like a black wall from center to ramparts. (shadows & light from 2 prongs & c.p. ?).	"	"	" "							several	Paris Obs France			"	180	3	D, B
360	/ /15		M. Imbrium		An appearance like a snow storm. (near FM ? when the myriads of white-haloed cra-ters give that look ?).														M		0	B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	Φ	Colon. Term Diat.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform Source	App. Ref	Wt.	Phenom. Type
	m d y	h m		λ ° , β °		m d h	m d h	πp ' " πa ' " π ' "		d	d	'	m d h	Kp, ΣKp			Ap K Pw					
								1900 A.D.														
361	/ /15		Alphonsus	4W, 13S	2 barely vis. dark spots in center that would disappear at times indep. of altitude of sun. Were also obs. by Lohrmann in 19th cent.										Barabaschev	Russia			F, C	387	3*	D
362	1/27/16	2200?	Plato	9W, 51N	A light sector vis. at bottom in shadow contained 3 bright spots, reminiscent of phosphorescent bodies.	Ja 04 14 F 02 00	Ja 17 05	61 20 60 42 54 00 58 39:		22.7:	.82:	179: 10:S	+7.6: Ja 20 08		Markov	"			"	"	3*	B, G
363	7/ 8/16	1900?	"	"	Light on the shadow of the bands at the bottom(similar to # 362).	Je 16 15 Jy 15 00	Jy 01 04	61 15 61 23 53 57 57 38:		8.4:	.78:	4: -5:R	-6.4: Jy 15 05		"	"			"	"	3*	B
364	9/ 5/16	1930?	"	"	Light on shadow of the bands at the bottom.	Au 12 09 S 09 13	Au 24 17	61 03 60 20 54 04 59 20:		8.1:	.87:	8: -1:R	-6.0: S 11 20		"	"			"	"	3	B
365	10/10/16	2100?	"	"	Reddish shadow spread over part of crater. Looked like vapor.	O 06 22 O 31 19	O 19 05	59 29 59 22 54 15 58 03:		13.5	.15: .18:	83: 74:R	-0.5: O 11 07		Observers	Florence Obs. Italy			F p521	181	3*	R, D
366	1/ 8/17	0730:- 0830:	Dionysius	17E, 4N	Pt. on rim shone like a star for some time after entering the shad. dur. ecl. (mid-ecl. at 0742. date given as 1/7/17 1930-2030 loc. time).	D 25 Ja 23 13	Ja 10 08	61 02 61 26 53 59 54 10	1h	13.5	.42 .46	90 107R	0.0 Ja 08 08		Ellison	England?			MB	182	2	B
367	8/29/17	2200?			Luminous obj. moving on moon. (terres. phenom. ?).	Au 03 22 S 01 08	Au 18 12	61 16 61 25 53 55 60 51		12.2:	.93:	55:	-1.6: S 01 12			France?			F p521	183	0	B
368	4/ 4/18	0100?	Linne	12E, 27N	In place of crater only a hill 2km in diam. was vis. (seen in dark!).	Mr 12 23 Ap 10 10	Mr 26 15	61 27 61 14 53 56 57 34:		21.2	.78:	174: -6:S	+6.3: Mr 27 16		Markov	Russia			F, C	387	1	
369	5/18/18	1800?	Plato	9W, 51N	Brightness in shadow of the light sector & 1 spot.	My 08 16 Je 05 08	My 20 14	60 35 59 45 54 08 54 17		8.2:	.45: .36:	10: 1:R	-7.3: My 25 23		"	"			"	"	3	B
370	2/21/19	2200?	Lexell	5W, 35S	Intensely dark line going out from it.	F 05 03 Mr 04 15	F 20 20	59 29 60 23 54 11 54 13:		20.9:	.52: .60:	166: 19:S	+6.9: F 15 00			England?			F p521	184	1	D
371	3/ 5/19	1719- 1734	Plato	9W, 51N	Crater seemed to be an intense green in the background of the ashen light. Slightly to the left(east?)of its center a bright spot that sparkled with a phosphor. light, lighting up the whole crater so that its W. edge could be seen. Light did not change for the whole time.	Mr 04 15 Ap 01 21	Mr 20 13	60 23 61 07 54 04 60 05	1/4h	3.2	.04	314 -55R	-10.9 Mr 16 16		Selivanov, Tartakov	Russia	4 R?150X		F, C	387	4*	B, G, V
372	6/10/19	1900- 1930:	Aristarchus	47W, 23N	Greenish-yellow light shone from inside the crater for 1/2 hr. after which it returned to normal. Violet tint on W. bank & surrounding area & the dark color of the saddle & dark spot were distinct. Term. slightly E. of Herodotus. (Ast. E)=IAU W.	My 28 17 Je 25 22	Je 10 06	61 09 60 32 54 03 54 07	1/2h	12.2	.53 .47	57 10R	-3.0 Je 13 16		Lapshin	"			"	"	3*	V, B
373	11/ 7-/19 8	2300:- 0100:	Tycho vicinity	15:W, 45S	Long ray in direction of Longomontanus remained vis., glowing in weak gray-green light dur. whole ecl. (mid-ecl. at 2336).	O 11 05 N 08 14	O 26 21	60 44 61 21 53 59 61 18	>1h	15.2	.00 .98	90 75R	0.0 N 08 00		Fock	Germany			MB	185	2	V, B
374	12/ 7/19	2000?	nr. Littrow	31E, 22N	Conspicuous ink-black mark. (N. of C. Argaeus or S. of Littrow?).	D 07 02 Ja 04 15	D 20 04	61 27 60 59 53 58 61 09:		14.8	.04: .04:	95: 54:S	+0.4: D 07 10		West	Gosport, England?			F p523	186	1	D
375	12/19/19	0400?	"	"	" " " "	"	"	" " 53 58:		26.6	.51: .44:	234: +85:S	+11.8 D 07 10	Aurora	Scholes	Huddersfield, England?			"	" p257	1	D
376	1919-1922		Linné	12E, 27N	In the light spot, a crater of 1km diam. & outside bank of 2-3km was visible.										Zakharov	Russia			F, C	387	1	
376a	2/23/20	2100?	S. cusp	90S	Peaks on S. cusp like a string of pearls, elonga-ing cusp. Lines drawn thru Stöffer & Curtius to limb gives position.	F 28 14		59 18		3.9:	.80:	325: 0 R	-10.0: Mr 04 21						F,C	387	0	B
377	3/22/20	1700?			Illumination on dark part of moon--also aurora on earth.	F 28 14 Mr 24 12	Mr 12 09	59 18 59 34 54 15 59 26:		2.3:	.96: .94:	300:	-11.8 Ap 03 11	Aurora		England?			F p523	187	1	B
378	11/23/20	2000?	near Furnerius	56E, 34S	Shaft of light projecting from moon, or spot so bright it appeared to. (strong ray?)	O 30 15 N 27 14	N 15 14	59 57 60 51 54 05 59 33:	-	13.1	.88	62: 111:R	- 2.3: N 26 02			England?			"	188	1	B
379	/ /20		near Vitruvius	32E, 18N	Some peaks near it were unusually bright at times & varied considerably in brilliancy.										Franks		6 R?		MBMW	90 p87	2	B, G
380	1920-1922		M. Crisium	55E, 15N	Dark spots appeared after sunrise & disappeared before sunset. Most were triangular, bounded by 2 light rays. Dur. low sun all of mare was gray & in high sun violet-green.										Chernov	Russia	2 R, 94X		F, C	387	1	B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term Distnc.	Days fr. FM & FM	Solar Kp	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ, b		m d h	m d h	π_p π_a π_i		d	d	°	m d h	K_p ΣK_p			Ap K Pc					
								1900 A.D.														
381	1920-1922		White spot E. of Picard	54E, 14N	A light spot (E. of Picard) whose brightness changes anomalously with sun changes.										Chernov	Russia			F, C	387	3*	B
382	1920-1923		Riccioli, Aristillus, Tycho, Schickard, Palus Putred.	76W, 3S 2E, 34N 11W, 42S 54W, 45S 3E, 26N	2 dark spots in Ricc. Aristill. N. bank, Tycho edge, 2 large spots on floor, dark spots in P. Putred. All appear sometime after SR, darker during FM, & disappear before SS.										"	"			"	"	0	D
383	10/16/21	2200-2400	Aristarchus	47W, 23N	Partial ecl. (94) different obs. noted at various pts. of the crater & brightness or phosphorescence in it. (indep. confirmation).	S 29 14 O 27 06	O 11 11	60 32 59 39 54 09 56 09	2h?	15.4	.62	90 43R	0.0 O 16 23		Genin, Dultsev, Zammyan, Nazarevskiy, Chernov, Shumakov, Shampaevskiy	Russia " " " " "			"	"	5*	B
384	11/15?/21	2000?	Plato	9W, 51N	Temporary increase in brightness of the light band at bottom noted close to FM. Crater activity noted in Oct. 10.	O 27 06 N 21 09	N 08 06	59 39 59 15 54 14 57 55		15.5:	.78:	92: 83: R	+0.2: N 15 14		Chernov	"	2 R, 94X		"	"	1	B
385	5/ 4/22	2000?	Archimedes	5W, 30N	Discovery of 3 long mounds in the crater. (rays?).	Ap 10 09 My 08 07	Ap 22 10	60 50 60 00 54 06 59 18		7.6:	.89:	7: 2: R	-6.5: My 11 06		Burnerd	England?			F b536	190	0	
386	6/ /22		Vieta	56W, 31S	2 dark spots, W. one became larger than E. one & the E. one acquired a triangular shape. Became closer together.										Chernov	Russia	2 R?		F, C	387	1	D G
387	7-9, 1922	?	"	"	2 dark spots were oval, E. one larger than W. one (opposite to case in June) both easily seen at 33X.										"	"	2 R? 33X		"	"	1	D
388	11/28/22	2200?	La Hire	25W, 27N	Shadow cut thru by white streak (real LTP? . Pickering's atlas shows same phase & col & shadow is all dark; elong. in peaks are N-S not E-W).	N 09: D 07:	N 22:		20m	9.9:	.68	29: 4: R	-5.6: D 04 12		Wilkins	England	15 L		MBMW	191	4*	B, G
389	9/23/23	1900?	Vieta	56W, 31S	Both dark spots merged together even with 94X magnification. (due to libration &/or seeing?).	S 12 22 O 11 04	S 28 17	60 29 61 11 54 02 55 06		13.0:	.38	83: 27: R	-1.2: S 25 01		Chernov	Russia	2 R?, 94X		F, C	387	1	D, G
390	8/14/24	2000	Herodotus	48W, 22N	Weak luminescence. (in mid-eclipse).	Au 11 20 S 07 07	Au 23 18	60 00 59 19 54 13 58 47		14.0	.11	90 42 R	0.0 Au 14 20		"	"	2 R?		"	"	3*	B
391	6/29/25	2000?	Plato	9W, 51N	Light bands in bottom seen in shadow & did not seem to be elevations. These have been seen 5X from 1913-1922.	Je 03 04 Jy 06 12	Je 23 08	60 59 61 23 53 53 56 38		8.5:	.76	6: -3: R	-6.4: Jy 06 05		Markov	"			"	"	3*	B, G
392	1925-1927		"	"	Light & dark bands in crater change their form.										Melikhov	"			"	"	1	B, D, G
393	4/11-/27 12	2300-0100?	Censorinus-Maskelyne	36E, 2.5N	2 luminescent pts. observed. Not vis. at same sun angle on May 7 & 12th. Not vis. on photos of Bern ph 5/23/62	Ap 30 19	Ap 15:	60 59		9.8		57 93 R	-5.2 Ap 17 04		Drozdov	"			"	"	3*	B
394	5/12/27	2200	Peirce A	53E, 17N	Complete obscuration of crater. Saw no trace of it. It was vis. My 11 & faint on My 13. 3X in 1948 Moore saw whole area misty gray & devoid of detail, whereas surroundings were sharp & clean. Bianchi also found it invis. at times in late 1800's.	Ap 30 19 My 28 20	My 13 01	60 59 54 04 54 05		11.4	.51 .45	46 93 R	-3.8 My 16 19		Wilkins	England	15 L		P	159 p113	4*	G
395	12/ 8/27	2000:	Picard	54E, 14N	Crater, after coming out of shadow after ecl. was unusually hazy. Next FM it was back to normal.					14.3		92 146 R or 34S	+0.1 D 09 18		Bogdanovich	Russia			F, C	387	3*	G
396	12/23/27 or 12/ 3/27 ?	2200	Peirce A	53E, 17N	Invisible. (date in MBMW is wrong. It would be only 6h before NM. Sunrise on crater is at 3d & SS at @18d age. No interposition of dates works, e.g., 13th or 1926, or Dec. 26 1923, only Dec. 3, 1927 is feasible as it would be just after 1st Q. & more similar to the May obs.).										Wilkins	England	15L		MBMW	192	4*	G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term Dist.	Days fr FM & nr. FM	Solar	Obsever	Location	Telescope	Seeing	Inform Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ° β °		m d h	m d h	π_p ' " π_a ' " π ' " 1900 A.D.		d	π_i d	°	d m d h	K_p, ΣK_p			Ap K Pw					
397	1929-1930		Grimaldi	68W, 5S	Changes in greenish-yellow tint at the bottom were pronounced at times. After SR the bottom was light.										Chernov	Russia			F, C	387	2	V
398	9/25/30 or 9/15/30 ?	0000 ?	Alphonsus	4W, 13S	During SS there was a triang. spot nr. W. wall until merging with shad. of wall (normal?) (date wrong as age is 3.2d & should be @ 23d. 9/15/30 would be correct; aux. data for 15th)	Au 23 20 S 21 05	S 05 22	61 22 60 57 54 00 57 26:		22.6:	.78:	180: 4:S	+7.7: S 08 03		Vasilev	"			"	"	0	D
399	2/22/31	2030	Aristarchus region	47W, 23N	Reddish-yellow glimmer of light, very variable with nearly complete extinction. (similar to Herschel's 1787 & Tempel's 6/10/1866 obs.).	F 03 22 Mr 04 11	F 18 22	61 13 61 29 53 57 54 44		5.3	.60 .66	330 77R	-9.7 Mr 04 11		Joulia	Castelnaudary, Aude, France ?				193	3*	R, G, B
400	3/27/31	2100 ?	Tycho	11W, 42S	Shadow anomaly--curious gray on c.p. tho interior was in shadow.	Mr 04 11 Ap 01 22	Mr 17 23	61 29 61 11 53 56 58 17:		8.5:	.82:	8: -3:R	-6.0: Ap 02 20		Barker	Chestnut, England	12.5L		P	159 p113	3*	G, B
401	4/25/31	1800 ?	Alphonsus	4W, 13S	The triang. dark spot close to the w. bank was not vis. after SR & appeared along the length of the term., 8-9°.	Ap 01 22 Ap 30 04	Ap 14 09	61 12 60 28 54 02 58 44:		7.7:	.84:	2: -2:R	-6.5: My 02 05		Vasilev	Russia			F, C	387	1	B, G
402	3/16/32	1845- 1930	Copernicus	20W, 9N	Term. from Cop. to lat. 20°S was misty & hard to define. Rest was usual sharp definition. Mistiness cleared at 1930. Cleaned his eyepiece & prism but it persisted.	F 24 02 Mr 23 09	Mr 10 22	60 32 61 13 54 05 57 04	3/4h	9.5	.76	16 -4R	-5.8 Mr 22 13	3_o, 8+	Barker	Chestnut, England	12.5L, 31	K		194	3*	G, B
403	4/15/32	0657	Plato	9W, 51N	Sudden appearance of a white spot like a cloud. Moved across the crater.	Mr 23 09 Ap 20 20	Ap 07 06	61 13 61 27 53 57 58 23		10.0	.83	26 17R	-4.8 Ap 20 21	4-, 23+	Goddard & friend	Portland, Oregon	16 L	S=G steady	MBMW	195, 131	4*	G, B
404	3/30/33	2000 ?	Aristarchus region	47W, 23N	White. (in dark part).	Mr 15 18 Ap 12 11	Mr 31 13	59 43 60 36 54 08 54 11:		4.7:	.47: .54:	337: -90:R	-10.7: Ap 10 14	3_o, 11_o	Douillet	France ?			MB	196	2	B
405	4/22/33	0100 ?	Bartlett	15W, 60N	morphological changes (in dark part of moon). Probably error by Madler & Neison. Different size 'scopes were probably cause of peculiarities.	Ap 12 11 My 09.5	Ap 28.2	60 36 61 13 54 00 55 18:		26.9:	.35:	239: -38:S	+11.4 Ap 10 14	4+, 28+	Moore	Meudon, France	3.5R			90 p225	0	B
406	9/ 1/33	0300 ?	Pico, Pico B	10W, 43N	Haze, more extensive & more symmetric with no protuberances than Oct. 1	Au 31 06 S 25 10	S 12 09	59 38 59 19 54 15 59 35:		10.9:	.03: .04:	48: 38:R	-3.1: S 04 05	2+, 14	Rawstron	U.S. ?	4R		MB	197	3*	G
407	10/ 1/33	0300 ?	Pico B	"	Haze--much narrower & elongated than on Sep. 1	S 25 10 O 22 00	O 10 05	59 19 60 04 54 13 58 03:		11.4:	.21:	54: 44:R	-2.6: O 03 17	1_o, 4+	"	"	", 330	KS=9/12	MB	197	3*	G
408	/ /33		Schickard	54W, 44S	Periodic changes in brightness of 4 spots in dark areas--changes in size from SR to SS (autumn of 1933--probably not LTP).										Emley, & several others	England				198	0	B, G
409	1933-1953		Timocharis	13W, 27N	During 20 yrs. Barcroft & others have frequently seen mists inside the crater.										Barcroft	Madera, California	6 L			159 p 3	3*	G
410	2/25/34	1830:	Pico B	8W, 43N	A large patch of haze appeared & drifted off across the mare in same direction as haze from Pico (white patch). It was obs. on 20 other occasions. Drawing.	F 12 23 Mr 12 12	F 24 22	60 47 59 54 54 07 54 14:		11.7:	.46:	51: 43:R	-3.7: Mr 01 22	3_o, 14+	Rawstron	U.S. ?	4R, 250	KS=8/12		197	3*	G
411	2/28/34	2200 ?	Schickard	54W, 44S	Well-known crateriform obj. presented anomalous, misty appearance of white spots. Confirmed by Moore in 1939, 1941.	"	"	" " 55 17:		14.9:	.57:	84: 30:R	-0.5: Mr 01 22	2_o, 8_o	Woolridge	Broomsgrove, England	6.5L			199	3*	G
412	12/23/34	2200	Peirce A	53E, 18N	Obscuration on floor. Crater invis. (similar to #394, 396).	D 09 08 Ja 06 12	D 25 10	60 07 60 59 54 05 54 14		17.2	.45 .52	123 4 S	+3.1 D 20 21	1+, 2+	Wilkins	England	12.5L		P		4*	G

ORIGINAL PAGE IS OF POOR QUALITY

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	Φ	Colong Term Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ° , β °		m d h	m d h	πp " " πa " "		d	d	°	m d h	Kp, ΣKp			Ap K Pw					
								1900 A. D.														
413	7/16/35	0501	Grimaldi, Riccioli, Linné, Schickard	66W, 5S 75W, 2S 12E, 27N 54W, 44S	Photos in lunar ecl. indicate a probable fading of Grim. floor a possible fading of S. tip of Ricc. spot, a possible enlargement of halo around Linné, a possible, but unlikely darkening of Schick.'s dark areas, & no effect on Eratosthenes or white spot E. of Webb. Linné enlargement more pronounced at 1902 ecl. than at any other time. Fading of Ric. spot was pronounced on May 14, 1938.	Je 20 10 Jy 18 03	Jy 06 03	59 47 60 36 54 09 60 08		15.8	.93	90 24R 15R 102R 36R	0.0 Jy 16 05	2_o, 9_o	deWitt	Nashville, Tennessee	12 L			200	5*	D, G
414	5/ 4/36	0200?	Eratosthenes	12W, 14N	Detected bright spots on floor	Ap 20 20 My 19 03	My 03 12	61 16 60 41 54 00 54 01:		12.6:	.52: .47:	62: 50:R	-2.5: My 06 15	5-, 25_o	Martz	Oak Park Illinois	10 R or 6 L?		MB	152	3*	B
415	6/22/36	0500	S. part of M. Crisium	60E, 10N	Both noted reddish spots nr. S. end of mare. (Martz could not confirm, moon had set for him)	Je 15 21 Jy 11 21	Je 27 21	59 52 54 14 56 43		3.0	.24	301 1R	-12.0 Jy 04 18	2+, 10+	Roth, Weldy, Martz	New Mexico? Oak Pk, Ill	10R, 6L			199 p11	4*	R
416	10/ 4/36	0700?	Eratosthenes	12W, 14N	Johnson drew bands, many small spots on floor. (Pickering's atlas, 9D, col. 141° shows bands but no bright spots).	O 01 15 O 30 03	O 16 08	61 17 61 29 53 56 60 16:		18.7:	.09 .10	132: 64:S	+3.5: S 30 21	1+, 3+	Johnson		7L, 8R, 12L?			152	3*	D, B
417	10/25/36	0300?	"	"	Small bright spots on floor. (Pickering's atlas 9A, col. 30° shows no spots).	"	"	" " 58 15		9.7:	.83: .82:	27: 15:R	-5.1: O 30 06	2-, 9+	Haas	New Mexico?	12 L?			152	4*	B
418	2/14/37	2200?	Cassini	4E, 40N	Bright spot. (in dark part! confirm. of Arkhipov?).	F 03.3 Mr 02.0	F 16.6	61 27 61 00 53 51 54 03:		3.5:	.44: .43:	313: -43:R	-10.5: F 25 08	4_o, 18+	Andrenko	Brazil?			MBMW	165	5*	B
419	2/15/37	1600?	"	"	Blue-greenish scintillating spots at bottom of crater were vis. on ashen light background. (confirm. of Andrenko?).	"	"	" "		4.4:	.46: .44:	327: 29:R	-9.7: F 25 08	4-, 19+	Arkhipov	Russia			F, C	387	5*	V, B, G
420	4/29/37	0930	Grimaldi	66W, 5S	Slight greenish color. (color of ground? not LTP?).	Ap 10.8 My 09.5	Ap 26.0	61 03 61 21 54 00 54 18		18.2	.60 .65	222 24S	+3.8 Ap 25 15	2-, 6 sc-1	Firsoff	Glastonbury, England	6 L, filters			201	4	V
421	7/22/37	0300?	Plato	9W, 51N	Floor distinctly greenish, but was gray on June 23, 1937 at 0600 & col. 84° (normal?).	Jy 06 09 Au 03 04	Jy 18 10	60 38 59 50 54 10 55 00:		13.9:	.63 .57	74: 65:R	-1.4: Jy 23 13	6-, 34+ ms?	Haas	New Mexico?	12L?			201	4*	V
422	7/27/37	0200	Plinius	13E, 15N	E. end of c.p. varied in intensity at similar lighting conditions. Intensity was lowest on this nite, being at I=5.0 other nites were:	"	"	" " 57 24		18.9	.74 .73	135 32S	+3.6 Jy 23 13	2-, 11+	Haas?	"	"			"	4*	D, G
					Date Time col. I																	
					6/23/37 0600 84° 8.5	Je 08 03	Je 20 20	61 12 54 03 54 21		14.4	.54	97R	-0.7	2+, 12_o							4*	
					7/20/37 0200 53 6.0	Jy 05.0		60 38 54 22		11.9	.49	66R	-3.4	5_o, 26-, sc+1							"	
					7/22/37 0300 78 6.5	Au 29 03	Au 09 18	59 17 54 08 55 00		13.9	.56	91R	-1.4	6-, 34+ ms?							"	
					9/22/37 0700 114 6.0	S 23 21	S 11 22	59 48 54 15 59 29		17.0	.99	53S	+1.8	3-, 12+							"	
					9/24/37 0830 142 6.5			60 40 59 46		19.4	.01	25S	+3.8	4+, 19+							"	
					10/17/37 0100 59 3.5	O 21 16		58 09		12.5	.83	72R	-2.9	2_o, 10-							"	
					10/21/37 0600 109 3.5			60 38		16.8	.98	58S	+1.4	2+, 13+							"	
423	9/17/37	2000?	Aristarchus	47W, 23N	Bright streak. Looked later but didn't see it. May have been reflection from wall.	Au 29 03 S 23 21	S 11 22	59 17 59 48 54 15 56 54:		12.8:	.75 .76	60: 13:R	-2.7: S 20 12	4_o, 19+	Johnson	Des Moines Iowa	7L, 8R			152	1	B
424	9/23/37	0500	Grimaldi	66W, 5S	Variations in green. Strong green on this date. Other dates of variations are:	"	"	" " 59 46		18.2	.02	129 118S	+2.7 S 20 12	3_o, 15+	Firsoff	Glastonbury, England	6 L, filter			201	4*	V
					Date Time Color																	
					4/29/37 0930 slight	Ap 12 08	Ap 27 10	61 02 54 00 54 12		18.2	.60	113S	+3.8	4_o, 26+ ms+1							4*	
					3/28/38 0930 strong	Mr 11 08	Mr 23 21	59 23 54 15 55 53		26.2	.70	13S	+12.2	2_o, 8+							"	
					7/24/38 0830 gray-green	Je 28 01	Jy 11 21	61 22 53 58 60 33		26.4	.92	13S	+11.7	2-, 10-							"	
425	9/28/37	0830 2030UT?	Aristarchus	47W, 23N	SW inner wall was intensity I=0.5, but was I=2.5 on July 2 at col. 195°. Obs. conditions identical. Band is darkening nr. col. 190°. (obs. in daylight? or stand time?)	S 23 21 O 21 16	O 09 18	59 48 60 40 54 08 58 36		23.4	.16	191 36S	+7.8 S 20 12	2+, 11+ sc-2	Firsoff?	"	"?			"	4*	D
426	9/28/37 29	0900?	Riccioli	75W, 3S	Deep purple color. Next nite vivid deep purple, but on July 2, 1937 at col. 195° it was gray tinged with brownish purple. Obs. conditions similar on all.	"	"	" " "		"	"	191 63S	"	"	Haas	New Mexico?	12L?				4*	V

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	Φ	Colong. Term Dist	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform Source	App. Ref.	Wt.	Phenom Type
	m d y	h m		λ β		m d h	m d h	π_p π_a π ′ ″ ′ ″ ′ ″		d	$\frac{\pi}{d'}$	°	d m d h	Kp, ΣKp			Ap K Pw					
								1900 A.D.														
427	10/26/37	1100?	Alphonsus, Ptolemaeus, Herschel	4W, 13S 3W, 9S 4W, 6S	These floors milky, others sharp. Alter not sure if due to photo contrast or real haze. (this started him on his regularly photog. the moon in 2 colors. Green has wrong date in his listing).	O 21 16 N 19 01	N 06 10	60 40 61 19 54 00 58 27:		22.0:	.16: .17:	173: 11:S	+7.4: O 19 22	$5_o,32_o$	photos by Moore & Chapelle, exam. by Alter	Mt. Hamilton California	36L			202	5*	G
428	12/12/37	2100	Plato	9W, 51N	Strong streak of orange-brown on E. wall. Floor nearly clear of shad., composed of many veins & thin streaks interwoven. At 21h irreg. extension seen spreading eastward down wall. Confirmed by younger son. In Jan. color area extended further E&W to beyond A&B (instead of between A&B as in Dec.). Confirm. from Fox who also in Feb. saw a golden brown spot on E. wall--seen every lunation from Dec. '37 to June, '38.	N 19 01 D 17 14	D 03 17	61 19 61 28 53 56 58 25	min?	9.7	.83 .83	27 18R	-5.0 D 17 19	$3-, 8_o$	Barker, Fox	Chestnut, Eng Newark, Eng	12.5L 6.5L, 240X		MB	200	5	R
429	/ /37		Schickard	55W, 45S	4 bright spots.										Emley	England?				200	1	B
430	1/16,/38 17	0000?	Plato	9W, 51N	Brownish-gold veined surface, color irreg. laid on a smooth floor.	Ja 15 02 F 12 06	Ja 27 06	61 04 60 13 54 04 60 30:		15.2:	.06: .07:	97: 92:S	+0.8: Ja 16 06	8, 26+ sc $8+, 53_o$, ms	Barker	Chestnut, England	12.5L		MB		3	R
431	2/14/38	0200?	"	"	Prominent gold-brown spot on E. wall with yellow glow without definite boundary, spreading over floor.	F 12 06 Mr 11 08	F 24 01	60 13 59 23 54 11 59 51:		13.5:	.06: .07:	78: 69:R	-0.5: F 14 17	$6-,35_o$ sc-1	Fox	Newark, England	6.5L, 240X		"	"	3*	R, G, B
432	3/13/38	0400?- 0600?	"	"	Slight touch of reddish color (Barker). Fox saw none on SE wall, but saw yellowish glow on S. floor at same time (conf.?) Fox saw same phenom. on Apr. 10, 11, My 8-11, June 8-10.	Mr 11 08 Ap 05 04	Mr 23 21	59 23 59 29 54 15 59 10:	2h?	10.8:	.07: .08:	48: 39:R	-3.2: Mr 16 05	$2_o, 9_o$	Barker, Fox	Chestnut, Eng Newark, Eng	6.5L, 240X			"	5*	R, B
433	3/28/38	0930	Grimaldi	66W, 5S	Slight greenish color.	"	"	" "		26.0	.68	231 14S	+12.2 Mr 16 05	2_o, 8+	Firsoff	Glastonbury, England	6L, filters			201	4	V
434	4/26/38	0930	Rocca	72W, 13S	Colored (dark?) area was intensity I=1.0	Ap 05 04 My 02 13	Ap 20 19	59 29 60 19 54 12 56 48		25.8	.78	227 25S	+11.8 Ap 14 18	$3_o,15_o$	Haas?	New Mexico?	12L?			152	4	D?
435	4/27/38	0830	"	"	Colored area was I=1.3	"	"	" " 57 38		26.6	.81	239 13S	+12.9 Ap 14 18	2_o, 11+	"?	"	"			"	3	D?
436	5/14/38	0800:- 0900:	Riccioli	75W, 2S	Fading of dark spot pronounced in this ecl. (mid-ecl. at 0839, photos?).	My 02 13 My 30 17	My 18 09	60 19 61 02 54 05 54 55	>1h?	14.3	.42	90 15R	0.0 My 14 09	$6+, 35_o$ ms?	de Witt	Nashville, Tennessee	12L			200	3	*D, G
437	5/17/38	0800	Plato	9W, 51N	Floor-least bit greenish (other colors on other dates, e.g. Je 23, '37, 7/22/37, & 7/15/38).	"	"	" " 54 10		17.1	.46 .52	123 66S	+2.9 My 14 09	4-, 22+	Haas?	New Mexico	12L?			152	3	V
438	6/2/38, 11/8/38	1800?	Macrobius	45E, 21N	Changes in dark areas over the lunation periods. (Not LTP).	My 30 17 Je 28 01	Je 14 18	61 01 61 22 53 59 59 40:		4.1:	.10: .11:	322: 7:R	-10.3: Je 13 00	$5_o, 21_o$	McLeod	Christine, N. Dakota	5L?150-210× Olcott)		P	203	2	D?
439	6/15/38	0800	Plato	9W, 51N	W. end of floor had intensity I=2.0, but on 7/15/38, I=3.7, conditions similar.	"	"	" " 54 00		16.7	.52 .55	117 72S	+2.3 Je 13 00	2-, 5+	Haas?	New Mexico?	12L?			152	4*	D
440	7/15/38	0800	"	"	Floor--definitely green under same conditions as 5/17/38 (see #437). Kaiser after 90 obs. couldn't find any regularity to the appearance of the brown color in Plato. I=3.7 comp. with I=2.0 on 6/15/38 (see #439--color of ground?).	Je 28 01 Jy 26 11	Jy 11 21	61 22 61 14 53 58 54 29		17.4	.62 .61	124 65S	+2.7 Jy 12 15	7_o, 41+ ms	Haas					152	4*	V
441	7/24/38	0800	Rocca	72W, 13S	Colored (dark?) area was I=4.3, comp. with I=1.0 on 4/26/38 (see #434) & I=1.3 on 4/27/38 (see #435).	"	"	" " 60 33		26.3	.92 .92	235 17S	+11.9 Jy 12 15	2-, 10-	"?	"	"			152	4*	B
442	7/24/38	0800	Grimaldi	66W, 5S	grayish-green color.	"	"	" " "		"	"	235 11S	"	"	Firsoff	Glastonbury, England	6L, filters			201	4	V
443	11/8/38	2000?	Proclus	46E, 16N	2 bright spots in Schmidt & Wilkins' craterlets. Was struck by whitish aspect of parts of floor--possibly mists. S. wall concealed by these strong white patches, as if breached ring.	O 16 08 N 11 04	O 30 07	59 15 59 51 54 13 54 06:		16.5:	.89:	107: 27:S	+0.9: N 27 22	$5-, 29_o$	Green	England?		S=6		323	3*	B, G

ORIGINAL PAGE IS OF POOR QUALITY

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term Dist	Days fr. FM & nr. FM	Solar K_p, ΣK_p	Observer	Location	Telescope	See-ing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ° , β °		m d h	m d h	π_p ' " π_a ' " π_i		d		°	d m d h				Ap K Pw					
								1900 A.D.														
444	11/ 8/38	2200?	Macrobius	45E, 21N	Changes in dark areas. (near Proclus where Green saw phenom. see #443).	O 16 08 N 11 04	O 30 07	59 15 59 51 54 13 54 06:		16.6:	.92: .91:	108: 27:S	+1.0: N 07 22	5-, 29$_0$	McLeod	England?	5L? (Olcott)		P	203	2	D?
445	2/23/39	2300?	Aristarchus	47W, 23N	Bright spot--bluish. (confirm of Malakhov).	F 03 12 Mr 04 11	F 16 15	61 28 61 00 54 02 55 27:		4.6:	65: 69:	324: 83:R	-9.8: Mr 05 18	3-, 14+ sc-1	Andrenko	Sao Paulo, Brazil	?		MBMW	165	5*	V, B
446	2/23/39	1700?	"	"	Intensive luminescence in background of ashen light that had ceased in March. (confirm of Andrenko).	"	"	" " 55 49:		4.4:	"	322: 85:R	-9.6: Mr 05 18	"	Malakhov, Filippoova	Russia Russia			F, C	387	5*	B
447	3/29/39	1900-1915	Copernicus	20W, 9N	C.P. diffuse light spot, faint glow as tho in a luminous mist. (3h before SR) Some indication of E. terraces, then vanished.	Mr 04 11 Ap 01 13	Mr 16 15	61 00 60 10 54 03 59 28	1/4h	8.6	91 90	19 -1 R	-5.4 Ap 04 04	6$_0$, 46$_0$ ms	Wilkins	Kent, England	6 L		Fi	201 p82	4*	G, B
448	4/22/39	1800?	Aristarchus	47W, 23N	Intensive luminescence in ashen light.	Ap 01 13 Ap 28 10	Ap 13 09	60 10 59 23 54 11 58 07:		3.0:	.79	309: 98:R	-10.9: My 03 15	5-, 25- sc-0.5	Malakhov, Filippova	Russia "			F, C	387	5*	B
449	6/30/39	0600:	Manilius	8E, 14N	Dark area in S. part was I=2.0 but was I=3.7 on 7/30/39. Obs. conditions were very similar.	Je 19 20 Jy 17 23	Jy 05 14	60 21 61 03 54 04 55 30		13.7	.38	69 77R	-1.3 Jy 01 16	4-, 25+	Haas?	New Mexico?	12L?			152	4*	D
450	7/ 6/39	0500:	Aristillus	2E, 33N	Dark area in W. part of floor was I=1.3 but other dates were brighter, or same, yet cond. similar. (see #454, 459&461).	"	"	" " 54 06		18.6	.60	143 35S	+4.6 Jy 01 16	5-, 20$_0$ ms	"	"	"			"	4*	D
451	7/ 9/39	0500:	Copernicus	20W, 9N	Dark area at foot of N. inner wall was I=1.8 Comp. with I=4.8 on 9/ 6/39. (see #460).	"	"	" " 55 00		21.6	.69	180 20S	+7.6 Jy 01 16	3-, 7$_0$	"	"	"			152	4*	D
452	7/10/39	0930:	Vitello	37W, 30S	S. part of dark area was I=2.5, but diff. values other times. (see #453, &457). Cond. were similar.	"	"	" " 55 48		22.8	.73	193 24S	+8.8 Jy 01 16	2$_0$, 7$_0$	"	"	"			"	4*	B?
453	7/11/39	0930	"	"	S. part of dark area was I=1.6 (comp. with # 452, &458). Cond were similar on all dates.	"	"	" " 56 35		23.8	.77	205 12S	+9.8 Jy 01 16	5-, 17-	"	"	"			"	4	D
454	7/26/39	0230:	Aristillus	2E, 33N	Dark area in W. part of floor was I=3.7. (see #456, 459, &461). Used diff. telescopes but cannot explain differences	Jy 17 23 Au 15 08	Au 20 00	61 03 61 23 53 58 56 03		9.2	.28	26 28R	-5.2 Jy 31 07	6-, 33- ms	"	"				"	4*	B?
455	7/30/39	0600:	Manilius	8E, 14N	Dark area in S. part was I=3.7 comp. with #449. Cond. were similar. (phase same, real difference?). (normal here?)	"	"	" " 54 19		13.4	.43	76 84R	-1.0 Jy 31 07	1+, 9-	"	"	"			"	4	B?
456	8/ 2/39	0001	Schickard	55W, 45S	Floor milky, walls almost vis. 2 bright pts. in area, not extending to extreme w. part of floor.	"	"	" " 53 58	1m?	16.1	50 .53	109 126S	+1.8 Jy 31 07	1+, 4+ sc-1	Moore	England	12L?		P		4*	G, B
457	8/ 9/39	0800	Vitello	37W, 30S	S. part of dark area was I=4.0 comp. with #452 &453, when cond. were similar on all 3 dates. (phase similar too --normal tonite?).	"	"	" " 57 14		23.4	.79	199 18S	+9.2 Jy 31 07	1+, 3+	Haas?	New Mexico?	12L?			152	4*	B?
458	8/27/39	0200:	Gassendi	40W, 16S	NE part of c.p. was I=6.4, compared with I=9.4 on 9/25/39 (see #462) under similar cond.	Au 15 09 S 12 18	Au 29 03	61 23 61 14 53 58 54 09		11.9	.43 .42	56 16R	-2.8 Au 29 22	3$_0$, 18$_0$	"	"	"			"	4	D
459	9/ 3/39	0500:	Aristillus	2E, 33N	Dark area in W. part of floor was I=4.0, comp. with I=1.3, & I=3.7 (see #450, &454). Used different telescopes, but can't explain diff. in albedo, since phase is similar in 2 & dist. from term. similar in all. (normal?)	"	"	" " 55 08		19.0	.63	144 34S	+4.3 Au 29 22	6$_0$, 35$_0$ sc	"	"				"	4	B?
460	9/ 6/39	0600:	Copernicus	20W, 9N	Dark area at foot of N. inner wall had I=4.8, comp. with I=1.8 in #451. (same phase so it is a real difference).	"	"	" " 57 04		22.1	.78	180 20S	+7.4 Au 29 22	3$_0$, 16$_0$	"	"	12L?			"	4*	B?
461	9/23/39	0100	Aristillus	2E, 33N	Dark area in W. part of floor had I=1.3, comp. with I=1.3, 3.7, 4.0 in # 450, 454, &459, respectively. (albedos d.sa - gree at same phases, so are real anomalies). (normal here?).	S 12 18 O 11 01	S 25 09	61 14 60 38 54 03: 54 23		9.5	.41 .40	25 27R	-5.6 S 28 14	2$_0$, 8+	"	"	"			"	4	D
462	9/25/39	0130	Gassendi	40W, 16S	NE part of c.p. had I=9.4, comp. with I=6.4 (normal? in # 458, under similar obs. cond. (&phase, thus real diff.).	"	"	" " 54 02		11.6	.49 .47	50 10R	-3.6 S 28 14	3$_0$, 17$_0$	"	"	"			"	4*	B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	See-ing	Inform. Source	App. Ref	Wt.	Phenom. Type
	m d y	h m		λ , ε		m d h	m d h	Π_p Π_a π		d	d	°	d m d h	K_p , ΣK_p			Ap K Pw					
								1900 A.D.														
463	10/19/39	0200?	Macrobius	45E, 21N	Reddish-brown hue (unusual) usually absent.	O 11 01 N 07 21	O 22 23	60 38 59 45 54 09 55 25		6.4:	.28: .29:	342: 27:R	-9.0: O 28 07	5-, 29_0 ms?	Barcroft	Madera, California	6 L		MB		3*	R
464	12/27/39	0800?	Aristarchus	47W, 23N	Faint bluish mist on inner W. wall. (according to Firsoff it was right after SR, but this can't be as age=16d & SR comes at@11d).	D 03 07 D 29 11	D 17 16	59 14 59 57 54 13 59 28:	min?	16.4:	.95: .92:	106: 123:S	+1.1: D 26 11	4-, 21+	"	"	"		Fi	201 p84	3*	G, V
465	5/20/40	2000	Schickard	55W, 45S	Fog on floor--milky appearance, less pronounced than on 8/2/39. (see #456).	My 18 19 Je 14 15	My 02 23	60 06 59 23 54 05 59 42		13.2	.07 .08	75 20R	-0.8 My 21 14	4-, 17-	Moore	England	12L?		P	pc	4*	G
466	6/14/40	0400	Plato	9W, 51N	2 hazy streaks, medium intensity, complex detail.	"	"	" " 59 22		8.1	.98	14 5R	-6.0 Je 19 23	6+, 32- sc	Haas	New Mexico?	12L?		MB		4*	G
467	6/20/40	0730	Archimedes	5W, 30N	NE wall (outer) had I=2.5 on this nite but 5.0 on Aug. 18 (see #471--both same phase so real diff.; 2.5 normal?).	Je 14 15 Jy 09 19	Je 27 11	59 23 59 33 54 16 57 35		14.2	.23	88 83R	+0.3 Je 19 23	1+, 7+	"?	"	"			152	4	D
468	7/14/40	0200 (UT?)	Tycho	11W, 42S	Luminous marks in shadow, ragged-edged & irreg. shape. E. wall had a milky luminosity.	Jy 09 19 Au 06 03	Jy 25 05	59 33 60 20 54 12 58 39		8.6	.16	20 9R	-5.4 Jy 19 10	5-, 27+ sc+1	Haas	"	"		Fi	201	4*	G, B
469	7/22/40	0400	Gassendi	40W, 17S	Largest bright spot in SE part of floor had I=8.6, but 6+ on other dates. (see #472, 474 & 475). (8.6 normal?).	"	"	" " 54 52		16.7	.39 .45	119 101S	+2.8 Jy 19 10	5-, 22_0	"	"	"			152	4	B
470	8/17/40	0730	Madler	30E, 11S	Bright spot on S. rim had I=8.9 on this date but 5.8 on Sep. 16, when observ. cond. were similar. (see #473).	Au 06 03 S 03 06	Au 21 22	60 20 61 03 54 05 55 08		13.5	.36 .41	78 108R	-0.7 Au 17 23	1+, 5_0	"?	"	"			"	4	B
471	8/18/40	0130	Archimedes	5W, 30N	NE outer wall had I=5.0, but was I=2.5 on June 20. (see #467)(similar colong.).	"	"	" " 54 51		14.3	.38 .42	88 83R	0.0 Au 17 23	4_0, 17_0	"	"	"			"	4*	B?
472	8/20/40	0400	Gassendi	40W, 16S	Largest bright spot on SE pt. of floor had I=8.6. (real changes? see #'s469, 474, &475, all at similar phase).	"	"	" " 54 15		16.4	.44 .50	113 107S	+2.2 Au 17 23	4-, 19+	"	"	"			"	4	B
473	9/16/40	0130?	Madler	30E, 11S	Bright spot on S. rim was I=5.8 comp. with 8.9 on Aug. 17 (see # 470).	S 03 06 O 01 16	S 18 08	61 03 61 24 53 59 54 13		13.9:	.42: .45:	82 112R	-0.5: S 16 15	4+, 17+	"	"	"			"	4*	D
474	9/18/40	0400	Gassendi	40W, 16S	Largest bright spot in SE part of floor had I=6.1, but 6.7, & 8.6 on other nites. (same ph., see #469, 472, & 475).	"	"	" " 53 59		16.0	.49 .52	107 113S	+1.6 S 16 15	2-, 6+	"	"	"			"	4*	D
475	9/19/40	0600:	"	"	Largest bright spot in SE pt. of floor had I=6.7, but 6.1 on last nite & 8.6 on others. (see #'s 469, 472, &474).	"	"	" " 54 02		17.0	.53: .56:	120: 109S	+2.7: S 16 15	1+, 5+	"	"	"			"	4*	D
476	10/19/40	0500?	Lichtenberg area	67W, 32N	Pronounced reddish-brown or orange color. Less marked on next nite, & slight on 22nd. (see #'s 477, 478).	O 01 16 O 30 04	O 15 10	61 24 61 14 53 59 54 35:		17.7:	.61:	115: 132S	+2.9: O 16 08	4-, 26-	Barcroft	Madera, California	6 L		MB		3*	R
477	10/20/40	0500?	"	"	Less marked reddish color than last nite. (see #'s 476, & 478).	"	"	" " 55 19		18.7:	.64:	127: 120S	+3.9: O 16 08	4-, 16+	"	"	"			"	3*	R
478	10/22/40	0600?	"	"	Only slight reddish color this nite, comp. with previous nites (see #'s 476, 477).	"	"	" " 56 03:		20.7:	.73: .72:	160: 87:S	+6.0: O 16 08	5-, 22-	"	"	"			"	3*	R
479	10/29/40	1200:	Cusps	90N 90S	N. horn extended @15° & S one @ 5-10°. Seen extended on other dates also. (see #'s 482, 485).	"	"	" " 61 10		28.0:	.98: .98:	224: 0:S	+13.2: O 15 08	4_0, 10+	Vaughan	Des Moines, Iowa	3 L			132	2	B, G
480	12/ 2/40	0000?	Aristarchus	47W, 23N	Seen in dark part as a bright spot.	N 27 12 D 25 06	D 09 08	60 35 59 39 54 10 58 15:		2.6:	.21: .16:	302: -105R	-12.8: D 14 20	5_0, 30_0	"	"	"			"	2	B
481	12/ 9/40	0400?	Tycho	11W, 42S	Some luminosity on W. rim or outer slope.	"	"	" " 54 15		9.6:	.49. .42:	24: 13:R	- 5.8: D 14 20	4-, 19+	Barcroft	Madera, California	6 L			"	3	B
482	12/25/40	1000?	Cusps	90N 90S	Each horn seemed prolonged @ 10°.	D 25 06 Ja 19 08	Ja 06 05	59 39 59 39 59 15 54 14 59 37		26.1:	.01:	224: 0:S	+10.6: D 14 20	4+, 23_0	Haas	New Mexico	12 L?			"	3	G, B
483	1/ 7/41	0400?	Arzachel	4W, 18S	Anomalous shadow. (date rep'd is 6th, but if loc. time =7th UT)	"	"	" " 57 24:		8.4:	.43	8: 4:R	-6.3: Ja 13 11	4+, 19+	Barcroft	Madera, California	6 L		MB	MW 165	3*	G
484	2/ 7/41	0300?	Conon	3E, 22N	Faint bright spot on floor no definite outline. (date reported is 6th, but if loc. time =7th UT	Ja 19 08 F 14 20	F 03 02	59 15 60 01 54 13 55 36:		10.0.	.70.	33: 36:R	-4.9: F 12 00	5-, 30_0 sc	Vaughan	Des moines, Iowa	3 L		MB		2*	G, B
485	3/ 7/41	0400?	Cusps	90N 90S	Prolongation suspected. (date reported =6th, but if loc. time =7th UT).	F 14 20 Mr 14 22	Mr 03. 3	60 01 60 53 54 08 54 45:		9.1:	.73:	11: 0 R	-6.3: Mr 13 12	4+. 23-	Barcroft	Madera, California	6 L		Fi	201 p127	1	G, B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar K_p & K_β	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ° φ °		m d h	m d h	π_p π_a π' (1900 A.D.)		d		°	d m d h				Ap K Pw					
486	3/31/41	0315	Aristarchus	47W, 23N	Seen in earthshine. (Haas thot it must have been unusually bright).	Mr 14 22 Ap 12 08	Mr 30 10	60 53 61 22 53 59 54 03		4.3	.54 .57	320 -87R	-10.8 Ap 11 21	8-, 43_σ sc	Barcroft	Madera, California	6 L			152	3*	B
487	7/11/41	0400?	nr. Hansteen	50W, 12S	Moving luminous speck, estimated 0.1"diam., mag. 8. (rept. date was 10. Lunar meteor?).	Jy 07.0 Au 03.0	Jy 19.0	60 07 59 24 54 12 57 24		16.4:	.17:	119: 111:S	+2.4: Jy 08 20	3_0, 13+	Haas	New Mexico?	12 L?			90 p281	3	B
488	2/2/42	1820-1915	W. of Kepler	37W, 7N	Whitish glow near earthlit limb.	Ja 14 22 F 11 12	Ja 26 17	60 31 59 36 54 09 56 44	1h	16.8	.68	111 106S	+1.5 F 01 09	4_6, 23+	Fisher	Brussels, Belgium			P	90 271	2	B
489	8/26/42	0400	Atlas	43E, 46N	Dark areas in crater faded (during ecl. ?)(mid-ecl. 0400).	Au 23 09 S 19 03	S 04 06	60 06 59 21 54 13 58 36		15.1	.11 .11	90 43S	0.0 Au 26 04	4-, 22_0	Haas	New Mexico?	12 L?		ME		4*	D
490	4/4/44	2000?	Hyginus N	6E, 9N	Darker than usual. S. edge of great crater valley was bordered by a narrow dark band for 13km along its length.	Mr 23 10 Ap 20 14	Ap 04 18	61 06 60 21 54 04 54 04		11.2:	.50: .44:	44: 50:R	-3.8: Ap 08 17	5+, 29 sc	Wilkins	Kent, England	15 L		P	204	4*	D
491	8/12/44	2300	Plato	9W, 51N	Appeared incomplete--central crater had its N. wall obscured. (low altitude?).	Au 05 22 S 03 06	Au 21 06	60 55 61 23 53 58 57 25		23.0	.24	186 3S	+7.7 Au 04 13	4-, 18+	"	"	8.5L		P	pc MO	4*	G
492	8/31/44	2100?	Schickard	55W, 45S	Saw a mist in it which was gone next nite. interior was dotted with white spots, contrasting sharply with dark areas. All very clear on Aug. 15 at sunset.	"	"	" " 60 24		13.0: 13.0:	.92: .92:	66: 11:R	-2.0: S 02 20	4-, 24+	"	"	"	S=E	P	204 p132	4*	G
493	/44		Cleomedes	56E, 27N	Missed the small depression in the N. wall. Schröter missed it at times also.										"	"	15 L?		P	pc Mo	4*	G
494	10/9/45	2323	Plato	9W, 51N	Bright flashes on floor near E. wall. (meteor? but others have seen flashes there too. time given is 1123, must be P.M., local time. MBMW gives date as Oct 19, which is wrong?	S 23 04 O 21 14	O 08 13	60 58 61 26 53 57 54 04		3.7	.54 .58	313 -56R	-11.5 O 21 06	3_0, 11+	Thornton	Northwich, England	18 L		P	90	4*	B
495	10/19/45	2100?	Darwin	65W, 23S	3 brilliant points of light on wall.	"	"	" " 60 58		13.6:	.94:	71: 6:R	-1.4: O 21 06	4+, 17-	Moore	England	12 L		MBMW	191	4	B
496	/45:		Aristarchus	47W, 23N	Bluish glowing streaks in fl. & on Mt. §. (Middlehurst has description as "pale light on crater floor" & has observer as H. H. Wilkins. misprint? or different observation & observer?).										H. P. Wilkins	Kent, England	15 L		P		4*	V, B, G
497	1/30/47	1900?	Eratosthenes	12W, 14N	Noted that W. component of c.p. was without normal shad	Ja 06 14 F 03 23	Ja 19 05	61 21 60 43 54 00 58 54		8.4:	.85:	13: 1:R	-5.9: F 05 16	4-, 12+	Hill	England?	8.5 L		P	201 p82	3*	G
498	8/28/47	2100?	SE of Langrenus	63E, 10S	Mountain on limb very decidedly biuish.					12.3:		58: 121:R	-2.9: Au 31 16	4+, 17_0	Baum	England?			MBMW	191	3	V
499	11/30/47	0000?	Aristarchus	47W, 23N	3 bright points on inner W. slopes.	N 03 14 N 30 18	N 18 23	59 24 60 17 54 10 60 13		17.2:	.98: .97:	114: 113:S	+1.6: N 28 09	3-, 14- sc-1	Favarger	France?			"	"	2	B
500	/47	2324	Plato	9W, 51N	Minute but brilliant flash under E. wall. R esembled an A.A. shell exploding in air at a distance of about 10mi. (has reported flashes here at least 3 times.)										Thornton	Northwich, England	9 L			410	3*	B
501	2/17/48	1930	Dawes	26E, 17N	Did not seec. p. saw cleft-like streaks from SW crest to E. shadow.	Ja 26 11 F 24 00	F 09 06	61 31 61 20 53 55 57 15		7.7	.70 .79	356 22R	-7.6 F 24 17	4-, 25+	Thornton	Northwich, England	18 L		P	208	3*	G
502	4/14/48	2000?	Leibnitz Mts.	90S	S. cusp prolonged--detached peaks--starlike pts. connected by fine filaments brighter than earthshine. (Barcroft, Haas, Vaughan, Moore, & Firsoff also have seen similar phenom.) (just sunlight catching high peaks?).	Mr 23 08 Ap 20 01	Ap 04 06	60 39 59 46 54 07 58 16		5.3:	.77: .81:	329: 0R	-9.5: Ap 23 13	5-, 21+	Wilkins	Kent, England	12.5L		"	159½	2	B, G
503	4/15/48	2000?	W. limb, 30°N. of Grimaldi	90W, 25N	Bright spot in earthlit W. limb. Estimated =3rd mag. star (not in MBMW ref. = 207 here).	"	"	" " 58 41		6.3:	.88:	348: -102R	-7.7: Ap 23 13	4_0, 22+	Vince	England?			MBMW	207	3	B
504	4/15/48	2000?	Plato	9W, 51N	Brilliant orange-yellow flash 1km inside E. rim. (similar to # 500--in dark).	"	"	" " "		"	"	348: -21:R	"	"	Thornton	Northwich, England	9 L		P	204 p137	3*	R, B
505	5/20/48	0000?	NE of Philolaus	30W, 70N	Red glow.	My 15 16 Je 10 19	My 29 20	59 18 59 53 54 14 58 32	1/4h	10.9:	.13: .16:	48: 18:R	-3.0: My 23 01	3-, 11+	Baum	Chester, England	4.5R		Fi	201 p82	3*	R, B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	See-ing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h' m		λ . β		m d h	m d h	π_p π_s π		d	d	°	d m d h	K_p ΣK_p			Ap K Ps					
								1900 A.D.														
506	7/21-/48 22	2200?-0100?	M. Crisium	60E, 15N	Almost featureless except for Peirce & Picard.	Jy 08 14 Au 05 20	Jy 24 03	60 42 61 15 54 01 55 54	hrs.	15.2	.48	100: 20:S	+0.9: Jy 21 02	4_o, 17_c 2+, 12+	Moore	England	12 L		MBMW		3*	G
507	7/27/48	0200?	Heraclides Point	34W, 42N	Blurred & misty; LaPlace Prom. was sharp.	"	"	" " 54 36		20.2:	.59: .68:	169: 55:S	+5.9: Jy 21 02	2+, 12+ sc-1	Doherty	Stroke-on-Trent, Eng.	3R ?6L ? or 10L?		P		3*	G
508	8/ 8/48	0000?			Bright flash on earthlit part; bluish-white to grayish-yellow. (meteor?).	Au 05 20 S 03 06	Au 20 09	61 15 61 23 53 57 60 34		2.8:	.10: .11:	306:	-11.8: Au 19 18	8-, 57_c ms?	Woodward	U. S.			"	159 p117	0	V,R,E
509	8/16/48 17	2230-0226	E. of Picard	56E, 15N	2 areas E. of Picard appeared featureless. Cloud-like patches.	"	"	" " 54 50	hrs.	10.8:	.39: .36:	44: 100:R	-3.8: Au 19 18	2-, 6-	Moore, Baum	Chester England	12 L?		MB	207 p 250	4*	G
510	8/20/48	2000?	Promontory Agarum	66E, 14N	Filled with fog or mist.	"	"	" "		15.8:	.54:	104: 10:S	+1.3: Au 19 18	6-, 31 sc+1, ms					M		3*	G
511	10/ 8/48	2100?	Barker's Quadrangle (Capuanus)	26W?, 34S?	Nebulous white patch in place of quadrangle. (in Capuanus? See Wilkins & Moore, The Moon, p124. Area in darkness.	O 01 16 O 29 20	O 13 21	61 01 60 15 54 05 55 59		6.1:	.25:	347: -39:R	-9.3: O 18 02	2+, 13_o	Moore	England	12 L?		MBMW		4*	G
512	10/19/48	2200	Heraclides Point	34W, 42N	Blurred, misty--LaPlace was Sharp. White diffused bright spot in S. Iridum close to Heraclides pt.	"	"	" " 55 47	min.	17.1	.65 .65	114 100S	+1.8 O 18 02	8-, 46+ ms	"	"	"		P		4*	G, B,
513	2/ 7/49	1800	Kepler	37W, 7N	White glow near crater. (Kepler in dark).	Ja 17 03 F 14 10	F 02 02	60 22 61 09 54 03 57 00:		9.6	.76	18 -19R	-5.6 F 13 09	5-, 27-	Fisher				MBMW	pc	2	B
514	2/ 9/49	2000?	Barker's Quadrangle (Capuanus)	26W, 34S	Quadrangle not seen, apparently misty. (quad. in Capuanus?, see Wilkins & Moore, The Moon, p124).	"	"	" " 58 48:		11.7:	.79: .84:	45: 19:R	-3.5: F 13 09	1+, 7- sc-2	Moore	England	12 L		"	"	4*	G
515	2/10/49	0000?	Cobra Head	48W, 24N	Vapor originating on W. side at landslip--all details clear except at this patch. Spread on plain.	"	"	" " 58 34:	min?	11.9	.82: .87:	51: 3:R	-3.4: F 13 09	3-, 12+ sc-1	Thornton	Northwich England	18 L			90, 207, V. 59, p175 Mo	4*	G
516	3/ 3/49	2000	Barker's Quadrangle	26W, 34S	Whole area hazy. (in Capuanus? see Wilkins & Moore, The Moon, p124)(It may not be this identification as 3 of 4 obs. are in dark, some nr. FQ so doubtful it could be seen).	F 14 10 Mr 14 12	Mr 01 00	61 00 61 27 53 57 55 06:		4.0	.63	314 -72R	-11.0 Mr 14 19	5_o, 28_c ms, sc+2	Moore	England	12 L		MBMW	obs. bk.	4*	G
517	4/13/49	0500:	Aristarchus	47W, 23N	Starlike brilliant spot seen just after 3rd contact. Not seen before & during totality. Thinks it was a high peak catching sun before others. Remained bright but larger as sun hit it.	Ap 12 09 My 10 15 (Confirmed)	Ap 24 22	61 14 60 34 54 01 61 00:		14.6	.03	90 43R	0.0 Ap 13 04	5+, 31_o sc+1/2	Vreeland & others	Mill Valley California	4.25R			332	1	B
518	5/ 1/49	2044	"	"	Glowing in earthshine as diffused patch. (confirm. by Barcroft a few hrs. later?).	"	"	" " 56 03	2s	3.5	.67 .68	314 -93R	-10.7 My 12 13	2+, 9+ sc-2	Wilkins	Kent, England	3R, 100X			208	5*	B, G
519	5/ 2/49	0300-0400	"	"	Dull glow--silvery phosphorescence. (confirm. of Wilkins a few hrs. earlier?).	"	"	" " 56 15	1h	3.9	.68 .70	320 -89R	-10.3 My 12 13	4-, 17+ sc-1	Barcroft	Madera, California	6L, 96X			"	5*	B, G
520	10/ 7/49	0240, 0252, 0300	"	"	Suspected glow during totality. (confirmation; alt. 60°).	S 23 04 O 21 15	O 07 17	61 16 61 23 53 58 53 59	20m	14.6	.52 .49	90 43R	0.0 O 07 03	7+, 42+ ms? sc+1	Braun, Reid Venor, Brinkman	Montreal Canada U. S.	5.5L, 60X 7 L, 12L, 70X			209	5	B
521	10/ 7/49	0123-0140	Atlas	44E, 47N	Changes in N. darkspot in ecl. in penumbra. Became darker as shadow approached & sharply distinguishable	"	"	" " "	min.	"	"	90 134R	"	"	Chernov	Russia			F, C	387	1	D
522	11/ 3/49	0053-0120	Aristarchus	47W, 23N	Blue glare on base of inner W. wall. (Times for him are obs. period & not necessarily duration. He used different 'scopes, powers & filters to verify phenomena).	O 21 15 N 19 02	N 03 18	61 24 61 00 54 00 54 01	1/2h	12.1	.48 .44	57 10R	-2.9 N 05 21	5+, 25- sc+2	Bartlett	Baltimore Maryland	3.5L, 100X	F-, G		210	4	V, B
523	3/30/50	2200?	Herodotus	48W, 22N	Transient c.p. (similar phen to Bartlett's in later yrs. ? see # 532).	Mr 06 13 Ap 03 20	Mr 22 11	60 26 61 09 54 03 58 10:		11.3:	.79: .86:	44: -4:R	-3.0: Ap 02 21	3-, 15_o sc+1	Wilkins	Kent, England	15 L		P		4*	G
524	4/ 2/50	2000:	Atlas	44E, 47N	2 dark spots dur. penumb. phase of ecl. quickly darkened & became sharp in detail.	"	"	" " 60 36:	min.	15.2	.96	90 134R	0.0 Ap 02 21	5+, 35_o ms?	Chernov	Russia			F, C	387	1	D
525	4/21/50	0330	Aristarchus	47W, 23N	Glowed in earthlight.	Ap 03 20 My 02 07	Ap 18 19	61 09 61 26 53 57 54 14		3.8	.56 .61	315 -93R	-11.1 My 02 05	2-, 8- sc-1	Barcroft	Madera, California	10L, 98X			211	3	B
526	4/22/50	0315-0440	"	"	Glowed in Earthlight.	"	"	" " 54 33	1.5h	4.7	.59 .65	327 -80R	-10.1 My 02 05	3_o, 9+ sc	"	"	"			"	3	B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena, Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Rel.	Wt	Phenom Type
	m d y	h m		λ , β		m d h	m d h	π_p π_a π		d	m, d		d. m d h	$K_p \Sigma K_p$			Ap K Pw					
								1900 A.D.														
527	6/27/50	0155-0935	Aristarchus	47W, 23N	Blue glare at base of inner W. wall. (his seeing estimates are on scale 1-10, where 10=best, transparency(T) is faintest star mag. vis. from 0-5).	My 30 16 Je 27 21	Je 12 06	61 12 60 34 54 02 60 30	7.5h	11.4	.92 .97	53 6R	-2.7 Je 29 20	2_0. 11+ sc+1	Bartlett	Baltimore Maryland	3.5L,100X	S=4 T=3		210	4	V
528	6/28/50	0314-0339	"	"	Blue glare, rim of W. wall.	Je 27 21 Jy 25 13	Jy 03 21	60 34 59 46 54 09 60 34	1/2h	12.4	.01 .01	66 19R	-1.7 Je 29 20	2_0. 9_3 sc-1, +2	"	"	"	S=4 T=3		"	4	V
529	6/29/50	0520-0541	"	"	Strong bluish glare on E. SE wall.	"	"	" " 50 21	21m	13.5	.01 .05	79 32R	-0.6 Je 29 20	6_0. 28_0 sc	"	"	"	S=6 T=5		"	4	V
530	7/21/50	0100?	Proclus	46E, 16N	C.p. disappeared (same intensity as floor?) normally much brighter.	"	"	" " 58 42:		5.8:	.83	343 29R	-8.2: Jy 29 04	3_0, 16+	"	"	4 L?			239	4*	G, D
531	7/26/50	0238-0257	Aristarchus Proclus	47W, 23N 46E, 16N	Blue glare base of inner W. wall. C.p. vis. whereas not usually. Proc. c.p. disappeared	Jy 25 13 Au 20 09	Au 06 15	59 46 59 18 54 15 59 44	20m	10.9	.09 .02	48 1R	-3.1 Jy 29 04	2_0. 10+ sc+2	"	"	3 5L,100X			210, pc	4* 4*	V G, D
532	7/27/50	0256	Herodotus Proclus	48W, 22N 46E, 16N	Pseudo c.p. in Herod. Drawings. (similar to #523). C.p. of Proc. disappeared.	"	"	" " 59 32	min?	11.9	.08 .06	60 12R, 106R	-2.1 Jy 29 04	4_0, 15_0	"	"	"			pc	4*	G, D
533	7/29/50	0400?	Proclus	46E, 16N	C.p. disappeared, or invis. (albedo =2?, normally=5).	"	"	" " 58 09:		13.9:	.14:	90: 136R	0.0: Jy 29 04	3_0, 18+	"	"	"			230	4*	G
534	7/30/50	0400?	"	"	C.p. disappeared, normally brighter than floor.	"	"	" " 57 42:		14.9:	.18:	102: 32:S	+1.0: Jy 29 04	$3+, 19_0$	"	"	"			"	4*	G
535	7/31/50	0355-0500	Aristarchus	47W, 23N	Violet glare on E., NE. rim.	"	"	" " 57 17	1h	16.0	.24 .22	110 117S	+2.0 Jy 29 04	3+, 21_0	"	"	"	S=4 T=5		210	4	V
536	8/25/50	1300?			Yellowish-white flare. (meteor?)	Au 20 05 S 15 07	S 03 10	59 18 59 54 54 14 58 21:	1/4s	11.3:	.15: .20:	63:	-2.6: Au 27 15	3-, 9+	Saheki	Japan			P	163, p56	0	R, B
537	8/28/50	0320-0426	"	"	Intense blue-violet glare on E. wall bright spot (EWBS), E. & NE rim.	"	"	" " 55 42	>1h	14.5	.29 .31	92 135S (45R)	+0.6 Au 27 15	4+, 26_0 sc	Bartlett	Baltimore, Maryland		S=8 T=5		210	4	V, B
538	9/26/50	0252, 0310	"	"	Brightening, fading, brightening again dur. totality. Phosphorescent glow. (date not given, but times match this ecl. confirmation?).	S 15 07 O 13 04	O 01 04	59 54 59 43 54 14 55 32	>1h?	14.1	.35 .39	90 43R	0.0 S 26 04	5_0, 24-	Reid, Venor	Montreal, Canada	6L.48X 12 L		P	209	5*	B, G
539	10/22/50	0100?	Proclus	46E, 16N	Central peak invisible.	O 13 04 N 10 13	O 28 20	60 46 61 22 54 00 55 56:		10.5:	.31: .31:	42: 88:R	-3.8: O 25 21	4_0. 17-	Bartlett	Baltimore Maryland	4 L?			230	4*	D, G
540	/ /50		Messier	46E, 3S	Strongly blurred.										Moore	England				163	4*	G
541	/ /50		Linné	12 E, 27N	Light spot dur. sunset, only W. half of 8km diam. outer bank & shadow was visible.										Markov, Khabakov	Russia			F.C	387	4*	B
542	1/21/51	1819-1838	Lichtenberg	66W, 32N	Red tinted patch.	Ja 06 13 F 03 15	Ja 18 14	60 58 60 05 54 05 54 40	19m	14.0	.60 .54	75 3R	-1.5 Ja 23 05	5_0, 22_0 sc	Baum	Chester, England	3R.100X	S=9.5	Fi	201	3*	R
543	2/ 4/51	2100-2300	E. of Endymion	60E, 55N	Mist covering peak. (in dark part of waning moon).	F 03 15 Mr 02 07	F 15 10	60 05 59 18 54 11 59 55	2h	28.1	.04 .05	247 +127S	+12.7 Ja 23 05	4_0, 17_0 sc-1	"	"	"		P	.	3*	G
544	5/17/51	2200?	Gassendi	40W, 16S	Bright speck, glowed for 3s. (meteor?).	Ap 23 23 My 22 04	My 03 17	60 30 61 10 54 02 58 45:	3s	11.8:	.85:	50: 10:R	-3.3: My 21 06	5-, 33_0	Wilkins	Kent, England	15 L		"	159, p118	0	B
545	8/20/51	0000?	Messier A	45E, 3S	Brilliant white circular patch in it. Has seen it & Messier blurred several times.	Au 15 04 S 11 20	Au 27 03	60 34 59 43 54 09 57 58:		17.1:	.17:	121: 13:S	+2.9: Au 17 03	6-, 37+ ms?	Moore	England			"	159, p147	4*	B
546	9/13/51	1400?	S. of Aristarchus	47W, 22N	Brownish-red color, blue on NW rim of A.	S 11 23 O 07 07	S 23 21	59 43 59 17 54 14 59 30:		12.0:	.07: .07:	69: 13:R	-1.9: S 15 13	6+, 38_0 ms	Osawa	Japan	6 L			212	3	R, V
547	10/20/51	0000?	Messier A	46E, 3S	Bright circular patch, similar to #545).	O 07 07 N 05?	O 21?	59 17		20.0:	.44:	158: 24:S	+5.0: O 15 01	6_0, 29- ms	Moore	England	12 L		MBMW	Mo's obs. bk.	4*	B
548	/ /51	1830-1838	near Lichtenberg	67W, 32N	Recorded a short-lived ruddy glow lasting <1/2h. Mädler freq. recorded a reddish patch here. A century later Barcroft obs. color here too.										Baum	Chester, England	6 L			159, p90	3*	R, B
549	2/4,/52 5	0200? 0200?	Plato	9W, 51N	A shadow in a depression, or a cloud, or an optical illus.? Oval dark area nr. center, disappeared in 15m clear & prominent at first then vanished 4 of 14 spots nr. center continuously seen while remaining ones seen only momentarily. (seeing?) Drawing includes sketch on March 7. His sketch shows 18 spots. 13 same as here.	Ja 26 12 F 23 22	F 08 09	61 24 60 51 54 00 54 42	1/4h	9.2:	.30:	20: 16:R	-5.9: F 11 00	2_0. 9+ sc-2	Carle	U.S.	8 L, 180X			213	2	D, G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	See-ing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ_o , β_o		m d h	m d h	π_p π_a , π_s		d	d	°	^m_d h	K_p, ΣK_p			Ap K Pw.					
								1900 A.D.														
550	4/ 3/52	2330?	Plato	9W, 51N	White spot under W. wall invis., should be seen easily. Searched in vain. 15 craters on drawing. Easy to see on Apr. 22, 1953. Variations with craterlets over the yrs. (confirm.)	Mr 22 22 Ap 18 08	Ap 03 18	60 00 59 18 54 14 54 16:	hrs.	9.0: .46:	.48: .46:	16: 7:R	-6.6: Ap 10 09	7-, 48$_o$ ms?	Wilkins, Moore	Meudon, France	33R, 460X		P	159 p147	5*	G
551	4/ 4/52	0400	"	"	Obscur. of floor. (seen 3-4h after Wilkins & Moore obs. confirm.?).	"	"	" " " 54 14	hrs?	9.2	.50 .50	18 9R	-6.4 Ap 10 09	6+, 42- ms?	Cragg	Mt. Wilson, California	12.5L		P		5*	G
552	7/ 3/52	1913-1927	Posidonius	29E, 32N	Making polariz. meas. of it, Aristotoles, Eudoxus, & Aristillus, only Pos. gave higher rdgs. & oscillated while others gave repeatedly same results. 40 other times Pos. was normal. Never had seen such behavior. Table gives deflections. Obs. repeated 2X Obs. from 1849-1947h.	Je 10 07 Jy 08 11	Je 25 23	60 30 61 09 54 03 59 23	1/4h	11.4	.81 .83	45 74R	-3.8 Jy 07 12	4-, 20- ms -2?	Dzapiashvili, Ksanforalif, Megrelishvili	Georgia Russia	13L Polarim.	S=dear	P	317	5*	G
553	9/ 9/52	2100-2120	Calippus	10E, 39N	Hazy broad line of light fr. NW wall to SE wall over shad. floor. Gone next nite at 0120. He gave low wt. to obs. (sunlight between peaks?).	S 03 06 O 01 13	S 15 19	60 11 60 32 54 03 56 35	20m	20.3	.30 .23	158 12S	+5.8 S 04 03	6$_o$, 40$_o$ ms?	Moore	England			P	pc	1	G, B
554	10/26/52	0023	Ptolemaeus	A 3W, 8S	A not seen tho searched for. Observer surprised since a much smaller crater in Plato could easily be seen. A was seen next nite easily. Not obs. since, tho not regularly obs.	O 01 13 O 26 12:	O 13 12	60 32		7.2	.98:	358 -5R	-6.0 N 01 23	6$_o$, 37- ms?	Bartlett	Baltimore, Maryland	3R, 75X	S=7 T=5		pc	4*	D, G
555	11/25,/52 26	0100?	Plato	9W, 51N	Sketch shows 8 spots--5 craters showed interior shad., 1 completely filled, but no others seen despite several hrs. of study. Spots that should have been seen were missing. Poor seeing converts floor into shimmering shapeless blob. Has observed it under good seeing & seen nothing on fl. as others have noted also.	N 23 08 D 19 21	D 08 03	59 15 60 01 54 13 59 00:	hrs.	8.5:	.09: .10:	18: 9:R	-5.5: D 01 13	6-, 25$_o$ ms?	Carle	U.S.	8L, 700X	S=P?		213	3*	G
556	12/24/52	2000?	Thaetetus	6E, 36N	Bright spot, hazy line of light	D 19 21 Ja 16 23	Ja 04 22	60 01 60 54 54 06 58 47:		7.7:	.22: .18:	12: 18:R	-6.4: D 31 05	5+, 29$_o$ sc	Moore	England?			MB	90 p238	4*	B, G
557	1/29,/53 30	2300? 0100?	Center of M. Fecundit.	45E, 3N? 8S?	Excess luminescence in spectrum between 4200&4700A, max at 4350A & between 4800&5200 A, max nr. 5050A. 20-60% dur. ecl., 50' from center of umbra.	Ja 16 23 F 14 10	F 01 12	60 54 61 24 54 00 54 17	> 1h?	14.4	.42 .46	90 135R	0.0 Ja 30 00	5$_o$, 40, 4$_o$, 26+	Dubois	Floirae, France			P	pc	5*	V, B
558	4/18/53	2100?	Cusps	90N 90S	Faint extension of cusps. (high peaks in sunlight?).	Ap 12 07 My 10 05	Ap 24 08	60 48 59 58 54 07 56 03:		5.0:	.23:	322: 0R	-10.4: Ap 29 04	4-, 21$_o$	Wilkins	Kent, England	15 L?		MB	MW 191	2	B, G
559	11/15/53	0200	Pallas-Schröter	14W, 5N	Saw & photog. a bright spot on term. between these 2 craters. Used Kodak 103aF_3.	O 21 16 N 18 23	N 03 02	61 13 60 30 54 22 59 01		9.3	.81 .89	15 1R	-5.9 N 20 23	5+, 34-	Stuart	England?	8 L f/8		P	214	5*	B
560	1/18-/54 19	2330:- 0330:	O. Procellar. E.M. Fecund.	55W, 10S 58 E, 2S	In ecl. (mid-ecl. at 03h) spectrographic excess luminescence; 1) waxing totality max. steady nr. 4450A at 50' from center of umbra; 2) waning totality, 4700-5050A, max. nr. 4900A, 25%, at 50' fr. center of umbra	Ja 10 10 F 06 06	Ja 25 12	59 18 60 08 54 11 56 42	> 1h?	13.9	.26 .32	90 35R, 148R	0.0 Ja 19 03	5$_o$, 20$_o$ 5-, 29$_o$	Dubois	Floirae, France			P	pc	5*	V, B
561	1/19/54	0300:	M. Crisium	53E, 16N	3 brilliant yellowish-white spots between Picard & Peirce. Phosphor. light distinguished easily against gray-green background of mare. Irreg., intermittent. Did not perceive them all dur. totality. Next day had impression that all of area was less clear & lightly veiled.	"	"	" " "	"	"	"	90 143R	0.0 Ja 19 03	5-, 29$_o$	Porta	Mallorca, Baleares	3R, 150X		M	pc	3*	R, G
562	3/23/54	0000?	Atlas	44E, 47N	Violet tint in crater	Mr 06 10 Ap 03 20	Mr 21 18	60 59 61 24 53 59 54 04		17.9:	.55 .58	130: 6:S	+3.5: Mr 19 13	6$_o$. 36+ ms. sc-c. 3	Delmotte	France?			MB	MW pc to Mo	3*	V

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	Φ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom Type
	m d y	h m		λ , β		m d h	m d h	π_p π_a π 1900 A.D.		d	d	°	m d h	K_p, ΣK_p			Ap. K Pw.					
563	5/10/54	2000 ?	Ptolemaeus	4W, 9:S	Flash. (meteor ?)(in Ptol. A ?)	My 02 07 My 30 13	My 15 02	61 18 60 44 54 00 55 44:		8.0:	.34: .30:	6 : -10:R	-6.9: My 17 22	3+, 14_0	Firsoff	Somerset England	5.5L ?		MB		1	B
564	5/11/54	2000	Eratosthenes	12W, 14N	Central peak invis. tho surroundings were sharp.	"	"	" " 54 39		9.0	.41 .34	18 6R	-5.9 My 17 22	4-, 23_0	Cattermole	England	3 R		P	pc	4*	G, D
565	7/14/54	0418- 0500	"	"	Violet glare on E. wall bright spot(EWBS).	"	"	" " 55 44	3/4h	13.7	.66 .64	73 26R	-1.7 Jy 16 00	4-, 20_0	Bartlett	Baltimore Maryland	5 L, 150X	S =4 T=3		210	4	V
566	7/16/54	0112-1612(UT)	Aristarchus	47W, 23N	Activity noted in it & an extension of moon's shadow on sky for 12min during .17phase of ecl. (source gave date as June 16, but ecl. was July 16)	Je 27 10 Jy 23 19	Jy 09 08	59 57 59 20 54 14 56 54		15.5	.70	90 43R	0.0 Jy 16 00	4-, 15-	Chernov	Russia	2 R ?,33X		F, C	387	1	B
567	7/16/54	0440- 0545	"	"	Whole interior, strong violet tint, violet tint in nimbus & VA. (just after ecl., @3h after leaving umbra).	"	"	" " 56 37	1h	15.7	.72 .72	98 129S	+0.2 Jy 16 00	4-, 15-	"	"	"	S=6 T=5		"	4	V
568	7/17/54	0650- 0715	near "	46W, 24N	Pale violet tint on surface NE of crater. No color elsewhere.	"	"	" " 57 38	1/2h	16.8	.79 .76	112 116S	+1.3 Jy 16 00	4-, 14-	"	"	"	S=5 T=5-4		"	4	V
569	7/24/54	0650- 0748	"	47W, 23N	Crater filled with pale violet light, overflowed onto E. glacis, even beyond nimbus to mare surface. Floor details were sharp, so prob. not a mist.	Jy 23 19 Au 18 06	Au 06 03	59 20 59 42 54 15 59 19	1h	23.7	.02 .02	196 31S	+8.3 Jy 16 00	3+, 15-	"	"	"	S=5 T=5		"	4	V
570	8/11/54	2200	"	"	Brilliant in red filter. Variable.	"	"	" " 56 49	min ?	13.0	.74 .75	53 6R	-2.6 Au 14 11	3_0, 14+	Firsoff	Somerset, England	6.5L, 200X		MBMW	pc	4*	R
571	8/18/54	0420- 0450	"	"	N. half of crater hazy & ill-defined.	"	"	" " 59 42	1/2h	19.3	.00 .00	140 87S	+3.7 Au 14 11	3_0, 18_0	Bartlett	Baltimore, Maryland	5L, 150X	S=5 T=4		pc	4*	G
572	9/ 8/54	2000- 2200	Proclus	46E, 16N	Brilliant blue color, at first for seconds, later for min 2h later, in blue filter.	Au 18 06 S 14 20	S 02 22	59 42 60 33 54 09 56 58	2h	11.3	.74 .82	42 88R	-4.0 S 12 20	3_0, 16-	Firsoff	Somerset, England	6.5L, 240X			201 b82	4*	V, B
573	10/ 8/54	2100 ?	Timocharis	13W, 27N	Red glow.	S 14 20 O 13 02	S 30 14	60 33 61 15 54 00 58 44:		11.8:	.84: .85:	50: 37:R	-3.4: O 12 05	3_0, 19+	"	"	" ?			201	4*	R, B
574	10/10/54	2000 ?	"	"	Brightening in blue filter, 1st for seconds, later for min.	"	"	" " 60 28:	mins	13.7:	.93: .92:	73: 59:R	-1.5: O 12 05	3-, 11_0	"	"	"			"	4*	V, B
575	10/11/54	0030- 0215, 0440- 0515	Aristarchus	47W, 23N	Violet tint on floor, E. wall & c.p., intermittent. Seen at 0440-0515, absent at 0030-0215.	"	"	" " 60 40	1/2h	14.2	.94 .94	79 32R	-1.0 O 12 05	3-, 11+	Bartlett	Baltimore Maryland	3.5L, 100X	S=7 T=3 S=7	T=3.5	210	4*	V
576	10/12/54	0055- 0210, 0449- 0524	"	"	Pale violet radiance on S. wall SE, E, NE walls, &c.p. At 0409 strong violet tint E 1/2 of fl; very faint on W. 1/2 of floor & W. wall. Dark violet on nimbus & pale violet on Mt. m	"	"	" " 61 05	>5h	15.1	.97 .96	90 43R	-0.1 O 12 05	0_0, 0_0	"	"	"	S=6 T=5 S=5 T=5		"	4*	V, G
577	10/13/54	0110- 0230, 0500- 0530	"	"	Bright blue-violet glare on E. rim; pale viol. radiance within crater, around S. wall on SWBS. Dark viol. in nimbus; pale viol. on m. At 0515 barely perceptible viol. radiance in crater; wall bands look faint. Could not get center in focus at 0515.	"	"	" " 61 15	> 4h	16.1	.00 .00	102 125S	+0.8 O 12 05	2-, 6-	"	"	"	S=5-3 T=5, S=7 T=5		"	4*	V, G
578	10/18/54	0615- 0730	"	"	Strong blue-violet glare on EWBS, E. wall & c.p.; viol. radiance, wall bands faint.	O 13 02 N 10 13	O 27 23	61 15 61 30 53 56 58 10	> 1h	21.3	.23 .18	166 61S	+6.0 O 12 05	6-, 35- ms ?	"	"	"	S=5-1 T=5		"	4*	V, G
579	11/ 5/54	2000 ?	Copernicus	20W, 10N	Bright point.	"	"	" " 58 27:		10.0:	.78: .83:	30: 10:R	-4.9: N 10 14	3_0, 16_0	Johnstone						2	B
580	11/ 7/54	2320	Kepler	37W, 7N	Luminous pts. (MBMW say "bright pt.; just outside E. wall.)	"	"	" " 60 27		12.3	.89 .91	58 21R	-2.6 N 10 14	3_0, 9-	Lugo	Caracas, Venezuela			P	pc fr. Mb	3*	B
581	11/11/54	0430- 0448	Aristarchus	47W, 23N	E. wall ?, blue glare. He was uncertain @it. Couldn't focus it. Herodotus unaffected.	N 10 13 D 09 02	N 24 00	61 30 61 11 53 56 61 26	18m	15.5	.02 .02	97 130S	+0.6 N 10 14	2_0, 11+	Bartlett	Baltimore Maryland		S=4 T=5		210	4*	V, G
582	11/12/54	0220- 0305, 0450- 0525	"	"	Blue-violet glare on EWBS & whole length of E. wall. Suspected viol. tint on VA; uncertain @ m. Greatly faded at later period. Brilliantly clear but couldn't focus it or area between Aris. & Cobra Head.	"	"	" " 61 05	3/4h, 1/2h	16.4	.07 .06	108 119S	+1.6 N 10 14	4-, 16+	"	"		S=5-6 T=3-4 S=5-6 T=5		"	4*	V, G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ° β °		m d h	m d h	π_p ' " π_a ' " π ' "		d	d	°	m d h	K_p, ΣK_p			Ap K Pw					
								1900 A.D.														
583	12/12/54	0220- 0308	Aristarchus	47W, 23N	Strong violet glare on E. rim, changing to brown. At0220 dark viol. in nimbus, at 0235 viol. changed to brown. At 0255 viol. suddenly reappeared, but faded to invis. at 0300. Again at 0308 reapp. Only time he ever saw such color changes.	D 09 02 Ja 06 09	D 21 09	61 11 60 24 54 02 59 50	3/4h	16.6	.15 .11	101 126S	+2.1 D 10 01	3_o, 15_o	Bartlett	Baltimore, Maryland	5 L, 180X			210	4*	V, R, G
584	1/ 8/55	0027- 0105	"	"	Strong viol. gl. whole length of E. rim; brightest SE & around EWBS.	Ja 06 02 F 02 19	Ja 18 03	60 24 59 29 54 10 60 05	38m	13.7	.07 .06	80 33R	-0.5 Ja 08 13	3-, 10-	"	"	", 150X	S=3-1 T=5		"	4	V
585	1/12/55	0440- 0515	"	"	Blue-viol. gl. on EWBS, E, NE rim.	"	"	" " 56 59	1/2h	17.9	.27 .21	131 96S	+3.7 Ja 08 13	5_o, 12- sc+1	"	"				210	4	V
586	4/ 2/55	0320- 0500	Straight Wall area	8:W, 22:S	Small craters between Birt & wall were invis. at times under excellent seeing, while craterlets on w. side were continually obs.	Mr 26 16 Ap 23 19	Ap 11 14	60 12 60 55 54 06 57 31	1 3/4	9.0	.23	29 21R*	-5.1 Ap 07 06	4_o, 25+	Capen	California?		S=E	MBMW	215	4*	G
587	4/ 5/55	0310- 0420	Aristarchus	47W, 23N	E. wall & glacis were violet. He was uncertain about it.	"	"	" " 56 01	70m	12.0	.32 .34	60 13R	-2.2 Ap 07 06	5-, 25_o	Bartlett	Baltimore, Maryland	3.5L, 100X	S=4-1 T=4		210	2	V
588	4/24/55	1900,?	near Posidonius	25:E, 32:N	White flash N. of M. Serenit. nr. Posidonius. (meteor?--in dark).	Ap 23 19 My 22 04	My 09 00	60 55 61 20 54 00 60 58:		1.5:	.01: .04:	290: -50:R	-12.9: My 06 22	5_o, 24_o	Wykes	England?					0	B.
589	5/ 5/55	0320- 0340	Aristarchus	47W, 23N	Pale viol. tint in E. 1/2 of floor. Viol. band at base of E side of c.p.	"	"	" " 54 39	20m	12.7	.41 .40	66 19R	-1.8 My 06 22	3+, 18-	Bartlett*	Baltimore Maryland	5 L, 160X	S=5-1 T=5		210	4	V
590	5/ 7-/55 8	2300:- 0100:	Lichtenberg	67W, 32N		"	"	" " 54 00:	2h?	15.5:	.48: .46:	102: 145:S	+1.1: My 06 22	5+, 30 -, 5+, 34_o ms?	Nicolini	Brazil			MBMW	165	1	
591	5/12/55	0340	Pico, Copernicus	9W, 46N 20W, 9N	It was invis. in violet filter, Copernicus was bright in it.	"	"	" " 55 18		19.6	.61 .65	153 36S	+5.2 My 06 22	3+, 13+	Firsoff	Somerset, England	6.5L, 70X	S=G		pc	4*	G, R, V
592	5/15/55	0330	Copernicus	20W, 9N	Almost as bright in violet filter as Aristarchus.	"	"	" " 58 30		22.6	.75	180 20S	+8.2 My 06 22	2+, 12-	"	"	"	S=G		pc	4*	V
593	5/24/55	2130- 2200	Leibnitz Mts.	52E, 80:S	Changing lights over a period of time, lunar aurora? Beyond cusps were 2 bright pts. 1 was sparkling & dancing & weaker intensity. Then a faint beam detached itself & shot up vertically, becoming more intense but fading at base. Total length @ 160km. Endured for > 2s. Due to telescope spider, or lunar aurora?	My 22 04 Je 19 14	Je 05 03	61 20 61 14 53 59 60 14	1/2h	3.0	.14 .10	308 0R	-11.7 Je 05 14	1+, 7_o sc-1	"	"	", 240X	S=VG		"	4*	B, G
594	5/25/55	1930	Proclus	46E, 16N	E. (IAU?) wall equally bright in red & green filters, dull in blue, invis. in viol. (in p.c. time given is 0730UT, but must have been 7:30 PM loc. time.	"	"	" " 59 18		3.9	.11	319 5R	-11.3 Je 05 14	7-, 23- sc	"	"	"	S=VG		"	4*	R
595	6/ 4-/55 5	2330- 2400	Timocharis	13W, 27N	Bright in red filter.	"	"	" " 54 06		14.1	.46 .45	83 70R	-0.6 Je 05 14	3_o, 15_o sc-2	"	"	", 70X	S=P		"	4*	R
596	6/25/55	2030	Theophilus	26E, 11S	Blue mist. Both c.p. & ENE (IAU?) ridge appear misty, slightly bluish & milky--renders effect perfectly. Absent next nite.	Je 19 14 Jy 17 20	Jy 02 09	61 14 60 09 54 02 56 50		5.6	.29 .22	339 5R	-9.3 Jy 05 05	3_o, 19+ ms?	"	"	", 240X		P	"	4*	V, G
597	7/ 3/55	2200	Schroter's Valley	48W, 24N	Drawing contains a star-like pt. at N. part of valley.	"	"	" " 54 10		13.7	.54 .51	77 29R	-1.3 Jy 05 05	4-, 17+	"	"	", 200X			201 086	4*	B
598	7/13/55	0250	Aristarchus	47W, 23N	Brilliant in blue & green filters. Didn't seem to be as clear as other craters.	"	"	" " 58 30		22.9	.78 .83	180 47S	+7.9 Jy 05 05	3+, 14+	"	"				pc	4*	V, G
599	7/15/55	0350	Herodotus	48W, 22N	Shadow from apparent c.p. (Orbiter photos don't show it but Apollo 15 oblique shows a very low hill or hills, but slope is < 25°	"	"	" " 59 36		24.9	.91	204 25S	+9.9 Jy 05 05	5-, 19-	"	"	"?		B	216	4*	D
600	7/28/55	2020	Copernicus	20W, 9N	Great brilliance of the terraces in E(IAU?) wall. System(?) gets specular refl. (he gave 0820UT, but must have meant 2020).	Jy 17 20 Au 14 18	Jy 29 22	60 43 59 56 54 09 54 09		9.4	.50 .41	26 6R	-6.0 Au 03 20	3-, 13+	"	"	", 200X			pc	4	B

ORIGINAL PAGE IS OF POOR QUALITY

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	Φ	Colong. Term Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ, β		m d h	m d h	π_p π_a π (″ ″ ″) 1900 A.D.		d		°	d, m d h	Kp Σ Kp			Ap K Pw					
601	8/ 3/55	0440- 0500	near Aristarchus	48W, 24N	Plateau m only, pale violet.	Jy 17 20 Au 14 18	Jy 29 22	60 43 59 56 54 09 55 12	20m	14.7	.62 .59	87 39R	-0.6 Au 03 20	4_0, 19_0	Bartlett	Baltimore, Maryland	5 L, 180X	S=4 T=5		210	4	V
602	8/ 3/55	0413- 0440	Proclus	46E, 16N	Floor blackish, 2° intensity, but in green filter assumed a distinctly mottled or flocculent appearance--seen only in green. Neither blue nor red had any effect, but on previous eve. green light had <u>not</u> produced such an appearance.	"	"	" " "	1/2h	"	"	87 134R	"	"	"	"	"	S=5 T=5		pc	4*	V, D, G
603	8/ 3/55	2100	Timocharis, Manilius	13W, 27N 8 E, 14N	Crater was bright in blue, seemed large & diffused. Manilius very bright in all colors, especially blue, extraordinarily so.	"	"	" " 55 36		15.4	.64 .63	91 102S, 81S	+0.1 Au 03 20	"	Firsoff	Somerset, England	6.5L, 200X			pc	4*	V, G
604	8/27/55	0151	near Carpathian Mts.	20W, 15N	Bright flare on dark side, 2nd mag. Remained steady, fading only slightly before abruptly disappearing. (meteor ?).	Au 14 18 S 10 01	Au 26 15	59 56 59 17 54 15 54 17	35s	8.2	.48 .42	6 -14:R	-7.3 S 02 08	2+, 13-	Mc Corckle	Memphis, Tennessee	6 L, 200X		MB	217	0	B
605	8/29/55	1945	Schröter's Valley	48W, 24N	Valley almost completely invisible in blue.	"	"	" " 55 27		12.0	.63 .57	52 4R	-3.5 S 02 08	3+, 19_0	Firsoff	Somerset, England	6.5L, 200X	S=P-F		pc	4*	R
606	8/30/55	0335- 0345	Aristarchus	47W, 23N	Floor, base of inner W. wall, NW wall had a faint bluish glare.	"	"	" " 55 10	10m	12.4	.64 .58	56 9R	-3.2 S 02 08	2_0, 11_0	Bartlett	Baltimore, Maryland	4 R, 150X 4 L, 150X 5 L, 180X	S=5-1 T=2-1		210	4	V
607	9/ 7/55	0320	Copernicus	20W, 9N	Brightening up of crater in blue filter.	"	"	" " 59 00		20.3	.86 .89	153 47S	+4.8 S 02 08	3+, 15-	Firsoff	Somerset, England	6.5L, 200X	S=VG		pc	4*	V, B
608	9/ 7/55	0300	Aristarchus region	48W, 24N	A dirty brownish misty effect on the area NE (Ast. ?) of crater. Darkened in blue & yellow filters alike.	"	"	" " "		"	"	153 75S	"	"	"	"	"	"		"	5*	R, G, V ?
609	9/ 7/55	0345- 0520	Aristarchus	47W, 23N	Strong blue-viol. gl. in E, NE rim & E. base of c.p.. Dark viol. nimbus..granular aspect of floor. (confirm. of Firsoff?)	"	"	" " 58 58	1.5h	20.4	"	154 73S	"	"	Bartlett	Baltimore, Maryland		S=5 T=3		210, pc	5*	V
610	9/ 8/55	0410- 0455	"	"	Strong bluish gl. on E, NE wall, S. edge of EWBS, & bordering both edges of the bright floor band passing W. of c.p. Dark viol. in nimbus.	"	"	" " 59 08	3/4h	21.4	.87 .93	166 61S	+5.9 S 02 08	3-, 15_0	"	"	5 L, 180X	S=4-1 T=5		210	4	V
611	9/ 8/55	0725	Taurus Mts.	40E, 30N	Attention directed to mts., saw 2 distinct flashes 1/4s apart that came from edge of those mts. (mts. in dark).	"	"	" " 59 12	1s	21.5	.93 .94	167 27S	+6.0 S 02 08	"	Lambert	Ironton, Ohio	small, 20X			217	3*	B
612	9/28/55	2300	Cobra Head	48W, 24N	Diffused patch of smoke or vapor, almost obscured--spread over plain for a short distance.	S 10 01 O 05 11	S 23 11	59 17 59 42 54 15 56 37		12.7	.73 .74	60 12R	-2.8 O 01 19	4+, 24-	Bestwick	England ?	6 L, 240X		P	pc from Mo	3*	G
613	9/29/55	0240- 0315	Aristarchus	47W, 23N	Floor blue clay color. (MBMW has date as 9/9/55 which is a typo error).	"	"	" " 56 41		12.9	.74 .75	62 15R	-2.7 O 01 19	5_0, 26-	Bartlett	Baltimore, Maryland	5 L 180X			210	4	V
614	9/30/55	2045	" area	48W, 24N	Area showed a westward yellow smear, looked darkish in red, indicating presence of green.	"	"	" " 57 41		14.5	.78 .82	78 30R	-1.0 O 01 19	7-, 40-ms ?	Firsoff	Somerset, England	6.5L, 200X			pc	4*	R, V
615	10/ 2/55	0530- 0555	Aristarchus	47W, 23N	Viol. gl. on E, NE rim, over EWBS resembled a viol. mist. Crater itself was hazy, could not get a sharp focus.	"	"	" " 58 49	1/2h	16.0	.90 .87	100 127S	+0.5 O 01 19	4+, 23+	Bartlett	Baltimore, Maryland	3.5L, 100X	S=7 T=5		210	4**	V, G
616	10/ 3/55	0210- 0240	Proclus	46E, 16N	Proc. D(his ID) normally a bright spot on E. floor disappeared as a dark spot, I=2.5 & barely disting. from 3° gray fl. In July lunation it was seen as normal bright spot at col. 347.57, 359.36, 36.74 & 61.83 but vanished after 61.83. C.p. abnormally dark & close to floor intensity. At 1st failed to find it. I=2.5 whereas it is normally 5.0.	"	"	" " 59 30	1/2h	16.8	.92 .91	110 23S	+1.3 O 01 19	4_0, 22_0	"	"	5 L, 180X	S=1-5 T=4		pc	4*	D

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar Kp,ΣKp	Observer	Location	Telescope	See-ing	Inform. Source	App. Ref	Wt.	Phenom Type
	m d y	h m		λ β		m d h	m d h	1900 A.D.		d		°	m d h				Ap K Pw					
617	10/ 3/55	0445-0505	Aristarchus	47W, 23N	Whole crater hazy, couldn't focus it. Herodotus unaffected	S 10 01 O 05 11	S 23 11	59 17 59 42 54 15 59 23	20m	16.9	.92 .91	111 116S	+1.4 O 01 19	4_o, 22_c	Bartlett	Baltimore, Maryland	3.5L,100X	S=5 T=3		pc	4*	G
618	10/ 4/55	0445-0505	"	"	Pale viol. tint on EWBS & whole E. rim; & dark viol. nimbus.	"	"	" " 59 34	20m	17.9	.96 .96	123 104S	+2.5 O 01 19	4-, 16_o	"	"	"	S=5 T=3		210	5*	V
619	10/ 4/55		"	"	Low dispersion (d=.13 whereas on Oct. 28 & Nov. 4 d=.03) Spectogram showing emiss. in central part nr. H&K (confirm. of Bartlett?).	"	"	" " ?		":	":	":	":	"	Dubois, Kozyrev	Crimea, Russia	50L		M	218	5*	V, G, B
620	10/ 5/55	0340-0348	"	"	Intensely bright blue-viol. gl. on EWBS, E, NE wall.	"	"	" " 59 42	8m	18.8	.00 .99	135 92S	+3.4 O 01 19	6-, 26+ ms ?	Bartlett	Baltimore, Maryland	5L,180X	S=6 T=5		210	4	V, B
621	10/28/55	0000?	"	"	Fraunhofer lines in UV spectrum were much narrower than in solar apec. Indicated luminescent glow which overlapped contour(?) lines. Greatest after FM, but fluctuated monthly with no indication of solar activity effect.	O 05 11 N 02 03	O 21 06	59 42 60 35 54 09 57 41		12.2:	.80: .82:	54: 7:R	-3.3: O 31 06	3-, 14_o	Kozyrev	Crimea, Russia	50L			220	5*	V, B
622	10/28/55	1830	rays of(? (in?) Herodotus	48W, 22N	Spectrum 3934A(K of Ca), 3968 (H of Ca) change in luminosity, 13% in H, 19% in K, 2% in H, 8% in K, in photo-line-depth method.	"	"	" " 58 27		12.9	.82 .84	64 16R	-2.6 O 31 06	"	"	"	"		Pa	219	5*	V, B
623	10/31/55	0040-0500	Aristarchus	47W, 23N	At 0040 bright blue-viol. gl., E, NE rim; dark viol. nimb; pale viol. radiance on m. At 0450 intense blue-viol. gl. on E, NE rim; dark viol. nimb., pale viol. on m.	"	"	" " 60 00	> 4h	15.2	.93 .92	89 42R	-0.2 O 31 06	5+, 29+	Bartlett	Baltimore Maryland		S=3-1 T=4 S=5 T=5		210	4*	V, G
624	10/31/55	1900	Cobra Head	48W, 24N	Dark blue obscuration.	"	"	" " 60 21		16.0	.95 .95	96 132S	+0.5 O 31 06	"	Milligan	England?			MBMW	pc to Mc	3*	V, G
625	11/ 1/55	0250-0305	Proclus	46E, 16N	Proc. D, normally 5° bright was vis. tonite only in blue light, whereas usually is vis. in integrated light. However at col. 110°.5 it was a dark spot (see #616) C. p. tonite was normal 5° bright but in Oct. Jun. was dark.	"	"	" " 60 27	1/4h	16.3	.97 .96	104 29S	+0.8 O 31 06	5-, 20+	Bartlett	Baltimore Maryland	3.5L,100X	S=6 T=5		pc	4*	V
626	11/ 1/55	0305-0330	Aristarchus	47W, 23N	Pale viol. tint on EWBS, E., NE. rim; dark viol. nimbus.	"	"	" " "	1/2h	"	"	104 123S	"	"	"	"	"	"		210	4	V
627	11/27/55	0235-0302	"	"	Floor, blue clay color. (MBMW & Bartlett have 11/6/55 entry, but both are misprints, should be 11/6/65, see #)	N 02 03 N 30 11	N 17 23	60 35 61 17 54 01 59 35	"	12.6	.86 .88	60 13R	-2.5 N 29 17	3-, 11+	"	"	"	S=6 T=3		210	4	V
628	/ /55		Aristarchus rays	50W, 20N	Luminescent substance--fluorescent within small depressions of rays--reached max. soon after FM, reaching into viol. light, @ 15% of ordinary background.							100: 50:R	+1.0:		Kozyrev	Crimea, Russia	50L		P	155 b92	4	V, B
629	/ /55		Plato, Tycho, Aristarchus	9W, 51N 11W, 42S 47W, 23N																		
630	/ /55		Cape Agarum	65E, 14N	Several occasions, a mist-like appearance seen there, especially when bisected by the sunrise term. Wilkins has seen a similar effect in the bay to the east.					3:		295 0R	-11.5:		Wilkins, Moore, others	Meudon, France	33R			90	4*	G
631	1/24/56	2200:	Cavendish	53W, 25S	Variable pt. of light on W. edge of crater. (confirm.).	D 29 00 Ja 26 13	Ja 11 08	61 30 61 08 53 57 60 45		11.8:	.95: .94:	55: 2:R	-2.7: Ja 27 15	6-, 36- ms ?	Houghton, Warner	England			MB		4*	B, G
632	1/27/56	0104-0132	Aristarchus	47W, 23N	Viol. gl. whole length of E. wall & around EWBS. Viol. tint on VA.	Ja 26 13 F 23 18	F 07 19	61 08 60 19 54 03 61 05	1/2h	13.9	.02 .02	81 34R	-0.6 Ja 27 15	6_o, 28- sc	Bartlett	Baltimore, Maryland	5L,180X	S=4 T=5		210	4	V
633	1/28/56	0220-0245	"	"	Pale viol. radiance on E. NE rim.	"	"	" " 60 45	1/2h	15.0	.07 .06	94 133S	+0.5 Ja 27 15	6+, 34+ sc+1, ms	"	"	"	S=3-1 T=5		"	4*	V, G
634	2/19/56	0030-0038	Proclus	46E, 16N	Proc. C, a small whitish spot on SW floor vis. within II. shad. as a 5° white bright spot. (wall must be > 45° to still have shadow!).	"	"	" " 58 30	8m	7.1	.86 .83	1 48R	-7.1 F 26 02	4+, 25+ sc	"	"	3.5L,100X	S=6 T=5		pc	4*	B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist	Days fr. FM & hr.	Solar	Observer	Location	Telescope	See-ing	Inform. Source	App.	Ref.	Wt.	Phenom. Type
	m d y	h m		λ, β		m d h	m d h	π_p, π_e, π (1900 A.D.)		d	w. d		m d h	K_p, $\frac{1}{2}K_p$			Ap K Pw						
635	3/14/56	1900	S. Cusp	61E, 90S	Twilight at S. cusp traced 640 km beyond cusp. No trace of twilight at N. pole.	F 23 18 Mr 22 00	Mr 06 13	60 19 59 27 54 11 57 27		2.3	.74	299 0R	-11.7 Mr 26 13	4_0, $\frac{1}{2}4_0$	Firsoff	Somerset, England	6.5L,		MBMW			4*	B, G
636	3/18/56	2000?	W. Limb	90W,	Anomalous dimming of 1Tau & 105Tau before occultation. (many of these fading occult. reported--may be doubles, but not known to be).	"	"	" " 58 58	<1s	6.2:	.88	348 102R	-9.7: Mr 26 13	2+, 11-							4		G
637	6/20/56	0325- 0353	Aristarchus	47W, 23N	Blue glare at base of inner W. wall.	Je 10 03 Jy 08 11	Je 25 08	60 58 61 21 54 00 55 10	1/2h	11.3	.37 .36	50 3R	-3.1 Je 23 06	3-, 16-	Bartlett	Baltimore, Maryland	4R 4L, 150X 5L, 180X	S=3-5 T=5		210	4		V
638	6/22/56	0410- 0442	"	"	South region distinctly granulated, I=6°, rest of crater=8°. SWBS absent.	"	"	" " 54 27	1/2h	13.3	.42 .43	75 28R	-1.0 Je 23 06	3_0, 17- sc-1	"	"	5L, 180X	S=6 T=3		pc	4*		D
639	6/26/56	0730- 0752	" & Proclus	" 46E, 16N	Intense blue-viol. gl. on EWBS dark viol nimbus. C.p. in Proclus invis. albedo=2?, normally=5.	"	"	" " 54 03	1/3h	17.4	.53 .57	126 101S	+3.1 Je 23 06	4+, 25+	"	"	"	S=5-4 T=4		210	4, 4*	V, B	
640	6/28/56	0515- 0552	Aristarchus	47W, 23N	Intense blue-viol. gl. on EWBS dark viol. nimb., pale viol. on m & VA. S. region again granulated & 6°, rest of crater 9° bright.	"	"	" " 54 28	1/2h	19.3	.58 .64	149 78S	+5.0 Je 23 06	4_0, $2\frac{1}{2}_0$	"	"	"	S=5 T=5		210	4*	V, B, D	
641	6/29/56	0600- 0620	"	"	Faint blue-viol. tint on EWBS	"	"	" " 54 55	1/3h	20.4	.61 .67	161 66S	+6.0 Je 23 06	5-, $2\frac{1}{2}_0$	"	"	"	S=5-1 T=5		"	4	V	
642	6/30/56	0630- 0720	"	"	Vivid blue-viol. gl. on EWBS, E, NE wall.	"	"	" " 55 29	3/4h	21.4	.64 .71	174 53S	+7.1 Je 23 06	5-, 30-	"	"	"	S=5 T=5		"	4	V, B	
643	7/ 3/56	1913	Posidonius	29E, 32N	Short term sharp changes in polarization in crater. (in green light?).	"	"	" " 58 29		24.9	.83	217 +66S	+10.5 Je 23 06	4-, 20+	Dzapiashvili	Pulkova, Russia			F, C	387	5*		
644	7/ 7/56	0300?	Grimaldi	66W, 5S	White streak extended toward limb. (< 1.5 days before NM).	"	"	" " 61 00		28.2:	.92 .95	257: +11:S	+13.8 Je 23 06	1+, 7+ sc-1	Azevado, et al	Brazil				333	2*	B	
645	7/25/56	0616- 0633	Proclus	46E, 16N	C.p. distinctly vis. within floor shadoe, est. 5° bright but no trace of it at col. 122°.37 in Oct. '55 (Oct. 4?).	Jy 08 11 Au 05 21	Jy 22 11	61 21 61 17 53 58 54 19	1/3h	17.0	.56 .59	119 14S	+2.4 Jy 22 21	5_0, 30-	Bartlett	Baltimore, Maryland	5L, 180X	S=3-5 T=4		pc	4*	B	
646	7/28/56	0520- 0555, 0708- 0733	Aristarchus	47W, 23N	Vivid blue-viol. gl. on c.p., band across E. floor, & EWBS E., & NE wall. Absent at 0720.	"	"	" " 55 31	1/2h	20.1	.65 .69	156 71S	+5.3 Jy 22 21	5-, 29-	"	"	"	S=5 T=4 S=5 T=5		210	4	V, B	
647	10/14/56	0115- 0200	Proclus	46E, 16N	C.p. abnormally dull & grayish, possibly only 4° bright. Definite loss of intensity as compared with last nite when it was > 5° bright.	O 01 02 O 27 06	O 12 23	59 55 59 15 54 14 54 20	3/4h	9.8	.47 .50	26 73R	-5.7 O 19 17	1_0, 5-	"	"	"	S=8 T=3		pc	4*	D	
648	10/15/56	0120- 0145	"	"	C.p. remains dull & grayish, but somewhat brighter than last nite, now 4°.5. At col 38° in June, peak was normal 5°, & in Sep. '55 at col 38° it was 6°, also 6° in July '55 at col. 37°.	"	"	" " 54 35	1/2h	10.8	.57 .54	38 85R	-4.7 O 19 17	1-, 4-	"	"	"	S=8 T=5		pc	4	D	
649	10/16/56	0228- 0245	Aristarchus	47W, 23N	Blue glare at base of inner W. wall.	"	"	" " 54 59	1/3h	11.9	.61 .57	51 4R	-3.5 O 19 17	3-, 7+	"	"	3.5L, 100X	S=6 T=5		210	4	V	
650	10/18-/56 19	2345- 0015	Proclus	46E, 16N	Proc. A normally very bright craterlet at foot of NE wall tonite est. at 8°, conformable to its intens. at col. 87° in '55 but not to col 85°.5 in '50 when it was not seen at all. (this is at bottom of apparent landslide seen on LO IV 12C.H61)	"	"	" " 56 35	1/2h	14.8	.71 .69	86 133R	-0.7 O 19 17	2+, 12+	"	"	5L, 180X	S=6 T=5		pc	4	B	
651	10/20/56	0008- 0032	"	"	Proc. D tonite is 5° bright, has twice disappeared & twice reappeared in the course of this lunation to date. First became vis. at col. 349° but invis. by col. 1°. Remained invis. till col. 37°, then disappeared sometime between col. 50°.5 & 86° (weather break) only to reappear tonite.	"	"	" " 57 10	1/2h	15.8	.74 .72	98 35S	+0.3 O 19 17	5+, 34-	"	"	"	S=4 T=4		pc	4	B	

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	Φ / π	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform Source	App. Ref.	Wt.	Phenom Type
	m d y	h m		λ β		m d h	m d h	π_p π_a π ′ ″ ′ ″ ′ ″ 1900 A.D.		d	d	°	d m d h	Kp, ΣKp			Ap, K, Pw					
662	10/20/56	0035- 0055	Aristarchus	47W, 23N	Bright blue-violet glare on EWBS, E., NE rim. Dark viol. on nimbus.	O 01 02 O 27 06	O 12 23	59 55 59 15 54 14 57 10	1/3h	15.8	.74 .72	98 129S	+0.3 O 19 17	5+, 34-	Bartlett	Baltimore, Maryland	5 L, 180X	S=4 T=4		210	4	V, B
653	10/26/56	1254	Alphonsus	4W, 13S	Photog. thru UV & IR filters, obscur. of E.1/2 of floor evident in blue plates--KodakII-O plate no filter, 2m later Kodak I-N. One pair of plates best he'd ever seen. Similar obscuration seen 2X on Linné. (this started Kozyrev on his spectographic program.).	"	"	" " 59 14	min ?	22.3	.98 .97	177 7S	+6.9 O 19 17	7-, 33_o 2 sc's	Alter	Mt. Wilson California	60 L	S=E	P	221	5*	V, G
654	11/15/56	0105- 0130	Aristarchus	47W, 23N	Faint blue radiance at base of inner W. wall.	O 27 06 N 21 17	N 09 19	59 15 59 46 54 13 56 25	1/2h	12.3	.74 .74	55 8R	-3.3 N 18 07	8-, 45_o sc+1, ms?	Bartlett	Baltimore, Maryland	3.5L, 100X			210	4*	V, G
655	11/15/56	"	Herodotus	48W, 22N	Pseudo c.p. clearly seen, est I=5.5, wratten filters showed it neutral to green, red, & yellow, but duller in blue. Floor est. 2°, distinctly olive-green. Precise time at 0117 at col. 55°27.	"	"	" " "	"	"	"	55 7R	"	"	"	"	"			pc	4*	R ?, G, V, B
656	11/16/56	0305- 0400 ?	Aristarchus	47W, 23N	Floor bright bluish tint E. of c.p., bluish-gray W. of c.p.	"	"	" " 57 14	1h	13.4	.76 .79	68 21R	-2.1 N 18 07	7-, 36_o ms ?, sc-2	"	"	"			210	4	V
657	11/17,/56 18, 19	0000 ?				"	"	" " 57 53 58 34 59 07:		14.3: 15.3: 16.3:	.84: .87: .91:	79:, 91:, 103:	-1.3:, -0.3:, +0.7: N 18 07	4-, 24- 5-, 23, 2_o, 9+					Pa	pres. at AGU	0	
658	11/17-/56 18	2330- 0030 ?	Aristarchus, Tycho, Proclus, Manilius, Byrgius, Kepler	" 11W, 42S 46E, 16N 8E, 14N 63W, 25S 37W, 9N	All these craters were extraordinarily bright.	"	"	" " 58 34	1h ?	15.3	.84 .86	91 44R, 80R, 43S, 81S, 28R54R	+0.3 N 18 07	4-, 24- 5-, 23_o	Argentiere, et al	France ?			MBMW	165, 333	3	B
659	12/19/56	0000 ?				N 21 17 D 19 13	D 07 16	59 46 60 42 54 07 60 40:		16.7:	.98: .98:	108:	+1.3: D 17 19	3-, 9_o					Pa	AGU	0	
660	/ /56		Tycho	11W, 42S											Dubois	France ?			MBMW	165	0	
661	/ /56														Vigroux	France ?			"	"	0	
662	2/16/57	2200 ?	M. Humorum	37W, 23S		F 14 11 Mr 14 22	F 27 15	61 30 61 04 53 56 61 06:		17.1:	.08:	120: 97:S	+2.2: F 14 17	3-, 15+					Pa	AGU	0	
663	2/18/57	0000 ?				"	"	" " 59 36 59 08		18.2:	.12:	135:	+3.3: F 14 17	4-, 26-					"	"	0	
664	3/17/57	0608- 0630	Proclus	46E, 16N	Proc. D appeared as a dark spot, conformable to its appear. at col. 111°15 in '55. Proc. A completely invis. tho ordinarily easy to see. Conspic. at col. 103°78 in '55 & at 110°15 in '55, but also invis. at col. 30°78 in '56.	Mr 14 22 Ap 12 01	Mr 27 04	61 04 60 16 54 03 60 16	1/3h	15.6	.11 .08	102 31S	+1.2 Mr 16 02	4_o, 24-	Bartlett	Baltimore, Maryland	5L, 180X	S=4 T=5		pc	4*	D, G
665	3/17/57	0630- 0655	Aristarchus	47W, 23N	Strong viol. gl. on EWBS, whole length of E. wall. Dark viol. on nimbus, pale viol. on plateau m. Area was hazy--couldn't focus it. Brilliantly clear nite.	"	"	" " "	"	"	"	102 125S	"	"	"	"	"	"		210	4*	V, G, B
666	3/18/57	0630- 0655	"	"	Strong viol. gl. on EWBS & E. wall; very strong viol. hue on nimbus.	"	"	" " 59 30	1/2h	16.6	.16 .12	114 113S	+2.2 Mr 16 02	4_o, 21+	"	"	", 110X	S=5-1 T=4		"	4	V, B
667	6/11/57	0435- 0500	"	"	Floor, uniform bluish radiance	Je 03 04 Je 30 08	Je 18 11	59 29 60 15 54 12 57 00	1/2h	12.7	.23 .30	70 23R	-1.2 Je 12 10	1+, 7-	"	"	"	S=4 T=4		"	4*	V, G
668	7/11/57	0510- 0530	"	"	Pale viol. radiance in crater & on plateau m.	Je 30 08 Jy 28 10	Jy 16 03	60 15 60 59 54 05 55 20	1/3h	13.3	.42 .39	78 31R	-0.8 Jy 11 23	3-, 9_o	"	"	", 180X	S=6 T=3		"	4*	V, G
669	8/ 5/57	2000 ?	Atlas	44E, 47N	A periodic change in shape of small dark spot at bottom of round spot further N. adjacent to inner wall. It was larger than in preceding months at same sun elev.	Jy 28 10 Au 25 18	Au 12 14	60 59 61 23 53 59		11.6:	.30:	36: 80:R	-4.7: Au 10 13	4+, 15+ sc-1	Chernov	Russia			F, C	387	2*	D

ORIGINAL PAGE IS OF POOR QUALITY

No.	Date m d y	UT Time h m	Feature	Selenographic Coordinates λ , β ° °	Phenomena Description	Perigee Dates m d h	Apogee Date m d h	Horizontal Parallax π_p ' "	π_a ' " 1900 A.D	π ' "	Duration	Age d	Φ d'	Colong. Term Dist. °	Days fr. FM & nr. FM m d h	Solar Kp, ΣKp	Observer	Location	Telescope Ap. K Pw	Seeing	Inform Source	App. Ref.	Wt.	Phenom Type
670	8/18/57	0620- 0735	Aristarchus	47W, 23N	Pale blue tint on walls;floor dazzling white--9°;inner walls dull--6°, uniformly tinted pale blue-gray.	Jy 28 10 Au 25 18	Au 12 14	60 59 61 23	53 59	55 59	1.25h	22.1	.67 .74	182 45S	+7.8 Au 10 13	3-, 14+	Bartlett	Baltimore, Maryland	5L, 180X	S=8 T=5		210	4	V, B, D
671	9/ 6/57	0255- 0324	Herodotus	48W, 22N	Pseudo peak visible within floor shadow at 0310h.	Au 25 18 S 23 05	S 09 00	61 23 61 17	53 56	54 17	1/2h	11.6	.44 .40	58 10R	-3.1 S 09 05	6-, 34_o sc, A+2	"	"	"	S=1-5 T=5		pc	4*	G, B
672	10/11/57	0305- 0325	Aristarchus	47W, 23N	Bright blue-viol. on EWBS, E, NE rim, dark viol. nimbus.	S 23 05 O 21 13	O 05 22	61 17 60 43	54 01	55 15	1/3h	17.3	.63 .63	120 108S	+2.2 O 08 22	4+, 27-	"	"		S=4-1 T=4		210	4	V, B
673	10/12/57	0213- 0308	"	"	Bright blue-viol. glare on EWBS, E, NE, NW walls;dark viol. nimbus.	"	"	"	"	55 39	1h	18.3	.65 .67	132 95S	+3.2 O 08 22	4-, 22_o sc-2	"	"		S=3-1 T=5		"	4	V, B
674	10/13/57	0300:	"	"	Flash--then a brownish-red color patch. Alt. @20°. (MBMW has Oct. 12, but is 13th UT).	"	"	"	"	56 10	1h	19.4	.68: .70:	144: 83:S	+4.2: O 08 22	5+, 29_o sc-1	Dachille,& daughter	Univ. Park Pennsylvania	10.5L, 75X	S=G		pc	5*	B, R
675	10/13/57	0345- 0415	"	"	Weak viol. gl. whole length of E. wall. (confirm. of activity).	"	"	"	"	"	1/2h	"	"	144 83S	"	"	Bartlett	Baltimore, Maryland	5L, 180X	S=5 T=4		210	5*	V
676	10/13/57	0700?	"	"	Bright spot of light--"explosion". (Confirm. of activ. in Aris. 3 indep. obs. within 4h).	"	"	"	"	56 15:		19.6:	"	147: 80:S	+4.4 O 08 22	"	Haas	Univ. Park New Mexico	12L			222	5*	B
677	10/15/57	0500- 0547	"	"	Strong blue-viol. gl. on whole length of E. wall	"	"	"	"	57 22	3/4h	21.4	.73 .78	157 70S	+6.3 O 08 22	3+, 20+ sc+1	Bartlett	Baltimore, Maryland	4R, 150X 5L, 180X	S=6 T=5		210	4	V
678	10/16/57	0547- 0613	"	"	Faint blue-gray tint on N, NW, W. floor & walls.	"	"	"	"	58 08	1/3h	22.5	.76 .81	171 46S	+7.3 O 08 22	2-, 7+ sc+2	"	"		S=5 T=3-2		"	4	V
679	/ /57		S. of Hyginus, Schneckenberg	5E, 7N 6E, 9N	A round spot S. of the rille where it bends toward Agrippa looked like that seen in 1879 & 1914 but different from Lohrmann's depiction in 1920s. It was round in 1824, couldn't be found on 8/8/1879 & in 1914 & 1957 it stretched out E-W. Not once in 1914 or 1957 was the sharply-detailed spot in Schneck. visible.												Chernov	Russia			F, C	387	1	D
680	5/ 1/58	0250- 0310	Aristarchus	47W, 23N	Entire sunlit area of floor was bluish.	Ap 03 21 My 02 06	Ap 16 23	61 25 60 59	53 58	60 48	1/3h	12.0	.90 .96	58 11R	-2.4 My 03 12	4+, 28_o	Bartlett	Baltimore, Maryland	4R, 4L 5L, 180X	S=1-5 T=3		210	4	V
681	5/ 4/58	0540- 0605	Proclus	46E, 16N	Proc. D completely invis. Proc. C abnormal appearance. At. col. 96°.04 in '55 this spot was normally small & 5°bright & also at 98°.78 in '56;but tonite was brighter--7°& larger.	My 02 06 My 30 07	My 14 11	60 59 60 12	54 05	60 24	1/2h	15.1	.10 .07	96 37S	+0.8 My 03 12	3_o, 16_o	"	"	5L, 180X	S=7 T=3		pc	4*	G, B
682	5/ 4/58	0610- 0645	Aristarchus	47W, 23N	Blue-viol. gl. on S. side of EWBS;dark viol. nimbus;pale viol. on m.	"	"	"	"	"	"	"	"	97 130S	"	"	"	"	"	"		210	4	V
683	5/28/58	0108- 0128	Proclus	46E, 16N	Only Proc. A &c.p. vis. on floor but at col. 27°.06 in Jy '57 A, Proc. C, Proc. E, M & the bright ray connecting the c.p. to Proc. C were all vis.	"	"	"	"	59 44	1/3h	9.2	.90 .92	27 74R	-4.9 Je 01 21	5-, 25_o	"	"	3.5L, 100X	S=6 T=4		pc	4	D, G
684	5/31/58	0320- 0400	Aristarchus	47W, 23N	Pale blue-gray floor;viol. band at E. base of c.p.	My 30 07 Je 26 09	Je 11 05	60 12 59 27	54 13	60 08	1/3h	12.3	.04 .03	65 18R	-1.7 Je 01 21	8_o, 38_o sc	"	"		S=7 T=3		210	4	V
685	6/29/58	0345- 0419	"	"	Floor was pale bluish tint.	Je 26 09 Jy 21 11	Jy 08 23	59 27 59 28	54 16	58 58	1/2h	11.8	.10 .11	60 13R	-2.0 Jy 01 06	8_o, 48_o ms, sc+1	"	"	4R, --L	S=3-6 T=3		"	4	V
686	7/ 2/58	0620- 0638	"	"	Strong viol. gl. whole length of E. wall involving EWBS. Dark viol. nimbus.	"	"	"	"	57 23	1/3h	14.9	.23 .23	98 129S	+1.0 Jy 01 06	2+, 14-	"	"	5L, 180X			"	4	V
687	7/ 2/58	0526- 0547	Proclus	46E, 16N	Proc. D invis.;c.p. remarkably dull & grayish.	"	"	"	"	"	"	"	"	97 36S	"	"	"	"	"			pc	4*	G, D
688	7/ 3/58	0618- 0715	"	"	Proc. C a remarkable phenom. of which he is certain. At beginning of obs. C was 5°bright & conspicuous--its normal appearance at or nr. SS. At 0620 it suddenly became dull so as to almost vanish. By 0640 C was very dull--3°.5. An indep. check was made at 0715 with same instru. & it was still at 3°.5.	"	"	"	"	56 38	1h	16.0	.24 .28	110 23S	+2.0 Jy 01 06	5-, 23-	"	"	"	S=5 T=3		pc	4*	G, D

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ / π'	Colong. Term Dist	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ° , β °		m d h	m d h	π_p ' " π_a ' " π ' " 1900 A.D.		d	d	°	m d h	Kp ΣKp			Ap K Pw					
689	7/ 3/58	0700-0712	Aristarchus	47W, 23N	Bright blue-violet glare on E., NE, rim; dark violet nimbus; pale violet on plateau m.	Je 26 09 Jy 21 11	Jy 08 23	59 27 59 28 54 16 56 38	12m	16.0	.24 .28	110 117S	+2.0 Jy 01 06	5-, 23-	Bartlett	Baltimore, Maryland	5 L, 180X	S=5 T=3		210	4	V
690	8/ 2/58	0550-0607	"	"	Strong viol. gl. on EWBS, & NE wall; dark viol. nimbus; strong viol. on m.	Jy 21 11 Au 17 15	Au 05 18	59 28 60 15 54 13 55 04	1/4h	16.4	.37 .43	116 111S	+2.7 Jy 30 17	4-, 21-	"	"	4 L, 240X	S=5 T=3.5		"	4	V
691	8/19/58	0105-0130	Proclus	46E, 16N	C.p. not vis. tonite, but vis. within the fl. shad.. at col. 319° in '57, & at 323° in '55.	Au 17 15 S 14 17	S 02 11	60 15 61 00 54 05 60 02	1/2h	3.9	.05 .05	322 9R	-10.2 Au 29 06	3+, 20+ sc+2	"	"	"	S=5 T=4		pc	4	D
692	8/21/58	0105-0134	"	"	C.p. abnormal aspect. Looked much larger than normal but dull & grayish--4° in full sunlight. At col. 345° in June lunation, peak was seen within shad. on floor at 5° white; also col. 345.°5 in Nov. '55 c.p. in sunlight was normal 5° & again at 346° in Sep. '59.	"	"	" " 57 18	1/2h	5.9	.11 .12	346 33R	-8.2 Au 29 06	3-, 13_o sc-1	"	"	"	S=5 T=3		pc	4*	G, D
693	8/22/58	0005-0029	"	"	C.p. still looks abnormally large but has lost its dullness, now 5°.	"	"	" " 56 37	1/2h	6.9	.15 .16	358 45R	-7.2 Au 29 06	6-, 31+ sc	"	"	5 L, 180X	S=6-0 T=3-0		pc	4	B, G
694	8/30/58	0630-0645	"	"	Proc. Q, a bright spot on NE rim apparently a crater presented a very abnormal aspect. Extraordinarily large & at least 9° bright--like EWBS on Aris. This spot is subject to large unexplained variations. At 97° col. in July, Q was also 9° bright but very small. At col. 96°.5 in May '58, col. 99° in Feb. '50, & 96° in Nov. '55 it was not seen at all. Assoc. with tonite was a distinct blue glare on NE rim, extending for short dist. & @ 2X as far as S.	"	"	" " 54 40	1/4h	15.2	.40 .45	98 35S	+1.0 Au 29 06	3_o, 18+	"	"	4 L, 240X	S=6 T=5		pc	4*	B, V, G
695	8/31/58	0630-0650	"	"	Q quite invis. tonite tho abnormally large & bright last nite. No trace of blue gl. Proc. A was 9° bright last nite & very conspicuous; couldn't be distinguished tonite, or conform. to col. 110° in July lun. when it was larger & 8° bright, & not conform. to col. 110° in Oct. '55 when it was also large & 6°, but conform. to 109° col. in July '50 when it also was invis. Proc. D was also invis. tonite but seen as a dark spot at col. 110° Oct. '55; c.p. was invis. to nite.	"	"	" " 54 22	1/3h	16.2	.43 .49	111 22S	+2.0 Au 29 06	3_o, 14-	"	"	"	S=6 T=5		pc	4*	G, D
696	8/31/58	0718-0735	Aristarchus	47W, 23N	Whole crater filled with pale viol. radiance, especially bright on walls. Pale viol. on VA & m. (Bartlett & MBMW have Sept. 1 which is an error.).	"	"	" " "	1/4h	"	"	111 116S	"	"	"	"	"	S=5 T=5		210	4*	V, G
697	9/23/58	0000?	Piton	3W, 39N	Enveloped in an obscuring, cloud-like mist.	S 14 17 O 13 02	S 29 22	61 00 61 24 53 59 56 01:		9.5:	.32: .30:	28: 25:R	-4.9: S 27 22	2_o, 10_o sc-2					MB		2*	G
698	9/24/58	0246-0302	Proclus	46E, 16N	Proc. C remarkably dull, 4°, grayish. Appear. does not conform to any comp. col. The ray (ridge ?) connecting to the c.p. was also grayish & 4° as was the c.p. Suggestion is strong that a common factor affected all 3.	"	"	" " 55 26	1/4h	10.7	.35 .33	42 89R	-3.8 S 27 22	3-, 12_o sc-1	"	"	5 L, 180X			pc	4*	G, D

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	Φ	Colong. Term Dist.	Days fr. FM & Nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref	Wt	[illegible]
	m d y	h m		λ ° β °		m d h	m d h	π_p π_a π (′ ″) 1900 A.D.		d	$\frac{\Phi}{\pi}$ d	°	d, m d h	K_p, ΣK_p			Ap K Pw					
699	9/29/58	0450-0515	Proclus	4 E, 16N	Proc. C presented remarkable appear. It regained its normal int. of 5° & was 2x as large as norm., being most conspicuous spot on floor. Not conformable to col. 103° in April when C was invis., nor to col. 102° in Mr '57, O'55, 104° when it was normal size & bright. --5°. D was invis. tonite but seen as a dusky spot at 102° col. in March, '57 & 5° bright at 104° col. in Oct. '55. C.p. remained dull --4° & grayish.	S 14 17 O 13 02	S 29 22	61 00 61 24 53 59 54 01	1/2h	15.7	48 .51	104 29SS	+1.3 S 27 22	2+, 10- sc-1	Bartlett	Baltimore, Maryland	4L, 240X	S=5 T=3		pc	4*	B, G
700	10/16/58	1800?	N. of Mare Crisium	42E, 2&N	Bright spot in dark part.	O 13 02 N 10 14	O 27 00	61 24 61 17 53 58 59 28:		3.8:	.10: .13:	317: -1:R	-11.0: O 27 16	4_o, 15+	Mayemson	England?			MBMW	pc to Hall	2	B
701	10/21/58	0118-0146	Proclus	46E, 16N	C so dull, seen with difficulty; not >3.5 at col. 10°.5 in June C not vis. nor at col. 10°.73 on S '50 & col. 10°.67 in Jy '50 but conspicuous & 5° at col. 12°.25 in S '55.	"	"	" " 55 49	1/2h	8.1	.29 .28	10 57R	-6.6 O 27 16	3_o, 13_o sc-1	Bartlett	Baltimore Maryland	5L, 180X			pc	4*	D, G
702	11/ 1/58	0000?				"	"	" " 55 04 55 35		19.2:	.66:	138:	+4.3: O 27 16	2+, 15_o					Pa	219	? 0	
703	11/ 3/58	0000-0100, 0300-0330, -0330-0345	Alphonsus	4W, 13S	C.p. redder than rest; emiss. spect. in 4756A, 4100, 3950A (C_3), 5165, 5130A (Swan bands) 3 spect. over 3.5h. Image of c.p. weakened in viol. light on spect. Noted visual decrease in brightness & reddish glow. Decrease in bright. & unusual white color (at 0300h-0330h). Sudden decrease in vis. bright. Spect. started--gave norm. spect. (0330-0340h). conditions almost identical to Alter's on Oct. 26, 1956. Nothing seen on Nov. 2-3.	"	"	" " 56 17	1/2h	21.2	.68 .76	170 14S	+6.5 O 27 16	4_o, 20+	Kozurev, Ezerski	Pulkova Ob Crimea, Russia	50L, 23 A/mm at Hγ			225	5*	R, B, G, D
704	11/19/58	2200-2205	Alpetragius	5W, 15S	Shadow anomaly. Portion of shadow vanished, replaced by lighter shade. At 2205, grad. darkened & was normal in 20 sec.	N 10 14 - D 09 00	N 23 05	61 17 60 40 54 02 54 42		8.6	.40 .32	14 9 R	-6.5 N 26 10	2_o, 11-	Stein	Newark, New Jersey	4 R		P	224, pc from Alter	3*	G
705	11/19/58	0400-0430	Alphonsus	4W, 13S	Large plume-like diffuse cloud over c.p., very large compared with c.p. (@30km diam.) with intensity much different from other parts. Brightness between walls & shad. floor. Would take 3 min. to collapse, so was continuously fed. 13-14 days later, at SS, c.p. was normal. (Kuiper took photos after Kozyrev's obs. but saw nothing abnormal.). Drawing. Haas saw nothing in 12L at same time.	"	"	" " 55 09	1/2h	7.8	.38 .29	4.5 0.5R	-7.2 N 26 10	2_o, 11-	Poppendiek, Bond	San Diego, California	6 L, 370X		P	223	4*	G
706	11/19/58	2100-2130	"	"	Reddish patch on c.p. (S. of it) about 3km diameter. (indep. confirmation).	"	"	" " 54 47	1/2h	8.5	.32 .40	13 9R	-6.5 N 26 10	"	Hole, Wilkins, Wall, Brewin	Brighton, Kent, --,-- England	24L, 500X, 15L, 12L, --		P	226	5*	R
707	11/22/58	0000?	"	"	Gray spot.	"	"	" " 54 07		10.7:	.47: .40:	39: 35:R	-4.4: N 26 10	2-, 6+	Bartha				MB		2	G?
708	11/29/58	2200?	"	"	Near site of Kozyrev's outbreak saw a circular patch, black pit center, & red, round masses all around it.	"	"	" " 56 30:		18.6:	.74: .68:	132: 52:S	+3.5: N 26 10	3+, 19_o	Wilkins	Kent, England	15L			204 p153	4*	R
709	12/ 2/58	0600?				"	"	" " 57 02 57 40		20.7:	.76	160:	+5.9: N 26 10	5+, 26_o A+2, sc-2					Pa	219	? 0	
710	12/ 3/58	1100?	Alphonsus	4W, 13S	Photog. spect. showed floor of crater redder than neighboring areas outside its walls. (Palm had a rep't for this date--same area?)	"	"	" " 57 40		22.2	.81	178: 6:S	+7.1: N 26 10	3+, 12+ A-1, sc-1	Alter, Wilson	Mt. Wilson, California	60L			227	5*	R
711	12/19/58	2000?	"	"	Reddish patch on central peak.	D 09 00 Ja 05 20	D 20 21	60 40 59 44 54 09 54 18		9.2	.38 .39	17: 13:R	-6.4: D 26 04	5-, 27+ sc+2, A+2	Wilkins	Kent, England	15L			228 p189	4*	R

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term Dist	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	See-ing	Inform. Sources	App. Ref.	Wt	Phenom. Type
	m d y	h m		λ ° φ °		m d h	m d h	π_p π_a π		d	d. d	°	d, m d h	K_p ΣK_p			Ap K Pw					
								1900 A.D.														
712	1/23/59	0620	Aristarchus	47W, 23N	Brilliant blue in interior, later turning white. Photos obtained. (MBMW has this entry twice for diff. dates because my source gave UT date as 23rd.).	Ja 05 20 Ja 31 06	Ja 17 17	59 44 59 13 54 14 56 16		14.1	.70 .68	77 30R	-1.5 Ja 24 20	3_o, 15+	Alter	Mt. Wilson, California	60L, 700X			229	5*	V
713	1/25/59	0000?				"	"	" " 57 27 57 59		15.8:	.75:	96:	+0.5: Ja 24 20	4+, 22_o sc					Pa	219?	0	
714	2/18/59	2100?	Alphonsus	4W, 13S	Red patch. (Moore, in Survey of the Moon says Jan. '59). Moore says, Warner, in Eng. saw it bright red in an 18-in refr. Hedervari & Botha in Hungary saw red patch & several in US. (indep. confirm. ?).	Ja 31 06 F 26 10	F 14 14	59 13 59 56 54 14 55 46:		11.1:	.68: .75:	40: 36:R	-4.5: F 23 09	2_o, 9+	Hole	Brighton, England	24L		MB	204 p153	5*	R
715	3/21/59	0200-0215	Proclus	46E, 16N	C again, ray connecting it to c.p., all equally dull & grayish, 4.5 bright. Not conform. to col. 48° in June '58 when all 3 were 5° bright, nor to col. 46° in Aug. '57 when c.p. & C were both brighter than normal, 6° & ray =5°.	F 26 10 Mr 26 09	Mr 14 09	59 56 60 48 54 07 57 36	1/4h	11.6	.84	48 95R	-3.7 Mr 24 20	2+, 12_o	Bartlett	Baltimore, Maryland	4L, 240X	S=7 T=3		pc	4*	G, D
716	3/24/59	0224-0235, 0435-0515	Aristarchus	47W, 23N	Strong blue & blue-viol. gl. on E. wall, EWBS, SWBS with intermittent display. At this time he noted in his 5-in L a total disappearance of the viol. gl. & a reappear. 1 min. later. Altogether, found 4 such occurences in his records, in '54, '57, & '59.	"	"	" " 57 36	16m, 40m	14.6	.93 .92	84 37R	-0.7 Mr 24 20	3-, 16_o sc-2	Bartlett	Baltimore, Maryland	4L, 180X 5L, 110X	S=3 T=5		210	4*	V, G, B
717	3/24/59	1851 2051(LT)	O. Procellar	50:W,	During penumbra of ecl. separate light pts. were sharply listing. Possibly connected with transparency of the penumbra. (time given was 0851 UT but must have been loc. timep. m. penum. phase started at 1756UT & umbral at 1916UT).	"	"	" " 60 27		15.3	.94	93 43:R	0.0 Mr 24 20	"	Chernov	Russia			F, C	387	2	B
718	3/25/59	0506-0542	Aristarchus	47W, 23N	Intense blue-viol. gl. on whole length of E. rim & on EWBS; dark viol nimbus. Filled with haze, could not focus it. Herod. not affected.	"	"	" " 60 36	1/2h	15.8	.94 .96	98 129S	+0.4 Mr 24 20	5+, 31+ sc-1	Bartlett	Baltimore, Maryland	4L, 240X	S=7 T=5		210	4*	V, G, B
719	4/19/59	0000?	W. of Mare Humorum	50:W, 25:S	Bright point.	Mr 26 09 Ap 23 18	Ap 10 23	60 48 61 20 54 00 58 20		10.9:	.83: .83	40: -10:R	-4.2: Ap 23 05	2_o, 9+	Mac Farlane	England?			MB		2	B
720	9/5/59	1913-1945	Aristarchus	47W, 23N	Star-like pt., intermittent, 2-5s in groups of 4 periods; intervals 30s-3m. 8-9th mag. (moon near setting--seeing?)	Au 13 16 S 07 17	Au 26 06	59 27 59 29 54 15 59 17	1/2h	2.7	.94 .93	306 101R	-11.1 S 17 01	6-, 34+ sc+1	Rule	London, England	3R, 130X	S=E	MB		1	B, G
721	9/8/59	2245-2350	Censorinus	33E, 1S	Much brighter than Proclus.	S 07 17 O 04 21	S 23 01	59 29 60 18 54 11 59 23	1h	5.9	.05 .05	347 20R	-8.0 S 17 01	3+, 19-	Nicolini?	Brazil				231	2*	B
722	9/13/59	2102	Littrow, nr. Hyginus	31E, 22N 6:E, 8:N	Obliterated by a hovering cloud (Feist disagrees). Budapest obs. saw a cloud at 21:02:30, lasting 5 m. Moore & Wilkins saw burst of light & dust cloud at 21:02:35 (Confirm.). Drawing by Lovas.	"	"	" " 57 53		10.8	.19 .23	46 77R	-3.1 S 17 01	5+, 18_o	Bradford Feist, Lovas Moore, Wilkins	S. Shields Eng. Hungary, Kent, Eng.	15L? --, 7R, 500×	S=G	MB	pc Mo 233, 415	1, 5*	G
723	10/23/59	0210-0225	Alphonsus	4W, 13S	Red glows, emiss. spect. got C_2, C_3. (Moore obs. 0100-0300 & saw nothing unusual in an 8.5-in refl.).	O 04 21 N 02 01	O 20 19	60 18 61 05 54 03 54 26	1/4h, 2h	20.6	.63 .65	171 13S	+6.4 O 16 16	4-, 15- ms-2	Kozyrev, Moore	Crimea, Russia, England	50L, 8.5L			234 204, p153	5*	R, G
724	11/5/59	1900	Aristarchus	47W, 23N	Blinking light in crater, 2 round white moving objects.	N 02 01 N 30 12	N 17 07	61 05 61 29 53 58 59 21		4.9	.17 .13	330 77R	-9.7 N 15 10	5_o, 31- ms?+1					M	235	1	B, G
725	11/17/59	2200?	Plato	9W, 51N	Light in crater.	"	"	" " 53 59	10m	17.5:	.52 .56	119: 69:S	+2.5: N 15 10	4+, 17+					M		1	B
726	11/ /59	2115-2215	Littrow area	31E, 22N	Concealed by a dusky cloud. Appeared to be steam or smoke. No change in 1h. Following week no trace. (SR Nov. 5. SS Nov. 18. Says he obs. at time of unmanned landing, but there were none in Nov.) Similar to # 722.	"	"	" "							Bradford	S. Shields England	15L, 480X			358	2	G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ° φ °		m d h	m d h	π_p π_a π		d	π′ d	°	d m d h	K_p Σ K_p			Ap K Pw					
								1900 A. D.														
727	1/6/60	1800?	Alphonsus	4W, 13S	Red spot. Hole saw this on several other occasions. (indep. confirm).	D 29 01 Ja 26 10	Ja 10 13	60 36 54 01 55 02:		7.8:	.35: .31:	4: 0:R	-7.3: Ja 14 00	4-,17-	Warner, Hole	London, Eng. England	18 R 24 L		MB	236	5*	R
728	2/6/60	1430	Aristarchus	47W, 23N	With naked eye saw bright pt. immovable but with brightness variations. (in dark part of moon, 2d past FQ, 2d before SR;)	Ja 26 10 F 23 03	F 07 06	60 36	1/3h	9.4	.48 .40	24 -23R	-6.1 F 12 18	5-,24+	Morozov	Moscow, Russia	naked eye			pc	3*	B,G
729	8?/1/60	2200?	Vitello	36W, 30S	Became illuminated. (should have been in shadow?; if several days before SR, date could be from July thru Dec. with Aug. 1 most likely, and ancillary data given for that date. Could not have been after SR).	Jy 08 11 Au 05 20	Jy 21 14		3m	9.2:	.86:	19: -11:R	-5.2: Au 07 03	4_O,22-					M		1	B,G
730	9/4,/60 5, 6	0000?			Spectral photom. of some lunar obj. in 4250, > 5000A bands. Spectral plates. Also on Sep. 5 & 6, 1960. (luminescence?)	S 02 21 S 29 22	S 14 18	60 12 60 04 59 24 54 12 59 09		12.6: 13.6: 14.6:	.04: .08: .12:	68: 80: 92:	-1.5: -0.5: +0.5: S 05 11	S_O,48+ sc, 5+,29- sc+1, sc+2	Miranova?	Russia? or Israel?			Bl	237	5*	V,R,B
731	11/27?/60	0000?	Piton	1W, 40N	Red obscuration concealing peak, @10m (if near SR, date is 27th; ancillary data given for 27th--date not given).	N 21 04 D 19 11	D 07 03	60 23 61 10 54 03 57 52:	1/2h	7.5:	.22: .20:	4: 3:R	-6.2: D 03 04	5-,28-	Schneller	Cleveland, Ohio	8 L, 53X			238	3*	G,R
732	12/26?,60	0000?	"	"	Red obscuration; less intense than Nov. (date not given, but discussion suggests near SR, therefore Dec. 26th most likely date--ancill. data given for 26th).	D 19 11 Ja 16 23	Ja 03 13	61 10 61 29 54 12: 57 05:		7.5:	.28: .23:	4: 3:R	-7.0: Ja 01 23	4_O,23+ sc	"	"	" "			"	3*	G,R
733	1/25?/61	0000?	"	"	Red obscuration: less intense than in Nov. (time & date not given, but discussion implies SR which is Jan 25th, 1961; ancill. data given for this date).	Ja 16 23 F 14 11	Ja 30 13	61 29 61 13 53 58 55 39:		8.1:	.20: .28:	9: 8:R	-6.8: Ja 31 19	4+,25+	"	"	"			"	3*	G,R
734	2/15/61	0811	Aristarchus, Plato, & 1 in center	47W, 23N 9W, 51N 0,0?	Seen as bright features in a film of a solar ecl. shown on BBC on May 6, 1966.	F 14 11 Mr 14 18	F 26 21	61 13 60 29 54 02 61 05		0.0	.04 .03	270 -137R, -97R, -90:R	-15.2 Mr 02 14	3_O, 13+	Sartory, Middlehurst	England, England				239	5*	B
735	4/19/61	2000?	Aristarchus	47W, 23N	Light flash for 15s. (meteor?).	Ap 11 08 My 06 12	Ap 23 10	59 37 59 20 54 15 55 42:	15s	4.6:	.35:	324: 83:R	-11.0: Ap 30 19	3-,15+					Cl	288	1	B
736	4/25/61	0337	Piton	1W, 40N	Shadow anomaly. Could not define it sharply. Shadow falls on a dark area so it could be confused.	"	"	" " 54 30		10.0	.57 .55	27 26R	-5.6 Ap 30 19	4-,14+	Bartlett	Baltimore, Maryland	4 L			240	4*	G
737	4/28/61	0435	"	"	Haziness or mist at base (East) was very undefined. he says may be due to small telescope & difficulty to define pts. of contact with mts. & mare.	"	"	" " 55 57		13.0	.68 .67	75 74R	-2.6 Ap 30 19	3+,14-	"	"	",240X			"	4*	G
738	5/26/61	0220- 0300	Furnerius, Stevinus	60E, 35S, 53E, 33S	Craters stood out like glittering points (small craters on rims?). Only anomalies among many features examined. (specular refl. from flat surface?).	My 06 12 Je 02 03	My 21 05	59 20 60 02 54 14 56 10	2/3h	11.4	.70 .74	44 104R, 97R	-4.1 My 30 04	4-,13+	Cameron	Adelphi, Maryland	3.5L, 160X Questar	S=G		note book	1	B
739	5/29/61	0245- 0330	"	"	Craters still had pts. that practically glittered. All other features normal.	"	"	" " 58.28	3/4h	14.4	.86 .85	81 141R, 134R	-1.1 My 30 19	3-, 9-	"	"	"	S=G		"	1	B
740	5/30-/61 31	2300?- 0100?	ray nr. Bessel, Aristarchus	17:E, 22:N 47 w, 23 N	Enhancement of spectrum in UV & Ca I recorded on photoelectric spectrometer scans.	"	"	" " 59 3.5	2h?	16.3:	.92: .92:	104: 59:S, 123:S	+0.8: My 30 04	3-,17-, 4_O,29+	Grainger, Ring	England, England				241	5*	V,B
741	6/27-/61 28	2300?- 0100?	Aristarchus	47W, 23N	Enhancement of Spectrum in UV at CaII similar to May obs.	Je 02 03 Je 30 01	Je 17 22	60 02 60 49 54 07 60 14	2h?	14.8:	.90: .93:	86: 39:R	-0.5: Je 28 13	3_O,13- 2-, 9_O	"	"				"	5*	V,B
742	6/29-/61 30	2300?- 0100?	E. of Plato	7:W, 51:N	Enhancement of spectrum in UV in CaII on photoelectric spectral scans.	"	"	" " 60 49	2h?	16.8:	.00: .00:	111: 76:S	+1.5: Je 28 13	6+,26_O ms? 2+, 8-	"	"				242	5*	V,B
743	7/1/61	0000?			Spectral photometry of lunar objects. Spectral plate in 4250- >5000A bands.	Je 30 01 Jy 28 09	Jy 15 11	60 49 60 42: 60 19 54 00 60 20:		17.8:	.03: .04:	123:	+2.5 Je 28 13	3_O,17_O	Miranova?	Russia? or Israel?			Bl	237	5*	V,G
744	7/30/61	0703- 0730	Agrippa	11E, 4N	Normally, dark landslip under NW wall is invisible. Tonite was white & est. at 5° bright.	Jy 28 09 Au 25 19	Au 11 17	61 19 61 22 53 57 60 44	1/2h	17.5	.07 .07	121 48S	+2.5 Jy 27 20	3_O,15+	Bartlett	Baltimore, Maryland	4 L, 240X	S=5 T=4		pc	4*	B,G
745	8/25/61	0100- 0200	Gassendi	40W, 16S	Crater had a capital gamma (Γ)-shaped string of star-like pts. (only abnormal thing noted).	"	"	" " 61 18	1h	13.7	.98 .98	76 36R	-1.0 Au 26 03	3+,18-	Cameron	Adelphi, Maryland	3.5L, 160X	S=G		note book	1	B
746	8/26/61	0125- 0141	Aristarchus, Schroter's Valley	47W, 23N 48W, 24N	During penumbra phase of ecl., Aris. appeared as bright white pt. easily seen in 6X binoculars. At the same time the fissure nr. Aris. & Herod. (Schroter's Valley?) could be seen, but not easily.	Au 25 19 S 23 04	S 07 20	61 22 60 57 53 59 61 22	1/4h	14.7	.01 .01	88 41R, 40R	-0.1 Au 26 03	3+,20-	Chernov	Russia	6× binoc.		F,C	387	2	B
747	9/23/61	0404- 0430	Agrippa	11E, 4N	Could not focus it tho Godin in same field remained sharp thruout obs. Features inside were vis. but outline was unsteady--like obj. seen thru heated air.	S 23 04 O 21 07	O 05 08	60 57 60 09 54 06 60 57	1/2h	13.1	.00 .00	71 82R	-1.3 S 24 12	1_O, 5-	Bartlett	Baltimore, Maryland	5 L, 180X	S=5 T=5		pc	4*	G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	See - ing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ , β		m d h	m d h	π_p , π_a , π		d	d		d m d h	K_p, Σ K_p			Ap K Pw					
								1900 A.D.														
748	9/27/61	0300-0315	Agrippa	11E, 4N	Landslip under NW wall normally 2° bright was invis. Wall here uniformly grayish, est. 4° bright.	S 23 04 O 21 07	O 05 08	60 57 60 09 54 06 58 53	1/4h	17.0	.16 .14	119 50S	+2.6 S 24 12	5-,30-	Bartlett	Baltimore, Maryland	5L,180X	S=3 T=5		pc	4*	D,G
749	10/17/61	0032-0052	"	"	Shadow of c.p. medium gray, compared with black wall shadow.	"	"	" " 58 45	1/3h	7.2	.83 .95	2 13R	-6.9 O 23 22	2_o, 2_o	"	"	"	S=2 T=5		"	4*	G,B
750	10/18/61	0043-0100	"	"	Shadow of c.p. remained grayish, wall shad. normal black. Not due to seeing as wall & landslide shad. not affected. Not caused by refl. sunlight because other similar obs. showed different aspects.	"	"	" " 59 15	1/4h	8.2	.87 .88	14 25R	-5.9 O 23 22	1_o, 5+	"	"	"	S=2-3 T=5		"	4*	G,B
751	"	0105-0125	Eratosthenes	12W, 15N	Fluorescent violet on inner E(IAU?) wall. (reported as bright spot in MB).	"	"	" " "	1/3h	"	"	15 3R	"	"	"	"	"	S=P T=G		243	4*	V,B
752	10/22/61	0430-0445	Agrippa	11E, 4N	Dark landslip on NW wall again invis., wall here is uniformly 5° bright.	O 21 07 N 17 05	N 02 02	60 09 59 19 54 13 60 03	1/4h	12.4	.03	77 88R	-1.7 O 23 22	2_o,11-	"	"	4L,240X	S=4 T=5		pc	4*	G
753	10/24/61	0145-0152	"	"	Dark landslip on NW wall remained invis. Wall here 5° bright.	"	"	" " 59 18	7m	14.2	.12 .10	88 99R	+0.1 O 23 22	3-,10_o	"	"	5L,180	S=3 T=4		"	4*	G
754	11/25/61	2130	Aristarchus	47W, 23N	Emission lines in spectrum of c.p.. Sharp at red end (H2), several km^2 area.	N 17 05 D 12 02	N 29 22	59 19 59 32 54 15 55 34		17.5	.34 .35	126 101S	+3.5 N 22 10	2+, 9_o	Kozyrev	Crimea, Russia	50L	S=E		244, 245	5*	R,B,G
755	11/27/61	2330	"	"	Emission lines in spectrum of c.p. in red & blue. H_2 identified. (he had obtained C_2 & Swan bands in Alphonsus in '58 &'59).	"	"	" " 54 34		19.6	.42 .44	152 75S	+5.6 N 22 10	2_o, 8-	"	"	"	S=E		244, 245	5*	R,B,V,G
756	12/3/61	0305-0340	"	"	Emission lines in spectrum of c.p., red & blue. H_2 identified, several km^2 area. Projected into shadow cast by W. wall. Source rose to a height above the crater.	"	"	" " 55 07		24.8	.63 .64	216 12S	+11.5 N 22 10	7-,40- ms?,sc+2	"	"	"	S=E		244, 245	5*	R,V,G B
757	4/22/62	0824, 1148	Mädler	30E, 11S	Photometric measures showed change in brightness from V_{mag}=3.79 to V= 4.40. The average brightness for age 17d is V=3.99. Crater faded from .2 mag brighter than av. to .4 mag. fainter(@ 1.5 times fainter) than av., a range of .6 magnitude, or @ 1.5 times diff. in brightness.	Ap 03 21 My 02 02	Ap 16 07	61 09 60 27 54 03 55 43	3.25h	17.5	.63 .65	122 28S	+2.3 Ap 20 00	5_o,33_o ms?,sc+u	Wildey, Pohn	Mt. Wilson, California	60L, photom.		C1	390	5*	D
758	5/20/62	0800?	Aristarchus, Kepler, Bullialdus	47W, 23N, 37W, 7N, 22W, 20S	Reddish color on Aris. All 3 craters were brighter than normal. A=0.88, K=1.03, B=1.05 magnitudes brighter than normal. (photometry).	My 02 02 My 29 13	My 13 23	60 27 59 38 54 11 56 13		16.1	.73: .66:	104: 123:S	+0.7: My 19 14	2_o,10_o	"	" ?	" ?			246	5*	R,B
759	7/10/62	0114-0148	Agrippa	11E, 4N	Shadow of c.p. med. gray, wall shad. & landslip normal black. C.p. very dull 4° bright.	Je 23 20 Jy 20 10	Jy 08 12	59 22 60 02 54 13 54 26	1/2h	8.0	.56 .61	4 15R	-7.5 Jy 17 12	3+,15o	Bartlett	Baltimore, Maryland	4L,240X	S=8 T=4		pc	4*	G
760	7/11/62	0052-0120	"	"	Shadow of c.p. light to med. gray, wall shad. & landslip shad. were normal black.	"	"	" " 54 55	1/2h	9.0	.62 .65	16 27R	-6.5 Jy 17 12	3-,18+	"	"	"	S=8 T=5		"	4*	G
761	7/17/62	0624, 0836	Kepler	37W, 7N	Crater was at V_{mag} 2.68 at earlier obs. which was .47 mag. brighter than av. mag. at 15d & it faded to near normal at later time to V= 3.10(photom. measures), a change of 1/2 mag. or @ 1.5 times in brightness.	"	"	" " 59 01	2h	15.3	.87 .88	90 53R	-0.2 Jy 17 12	1_o, 4-	Wildey, Pohn	Mt. Wilson, California	60L, photom.		C1	390	5*	D
762	7/18/62	0954	Mare Crisium	57:E, 9:N	Photometric meas. showed change in brightness of the area of over a mag. during the nite. Recorded at V_{mag}=3.56 first, & a few min(?) later at 4.62. It was .95 mag. brighter (@2.5 X) than av. for that age, & then returned to normal.	"	"	" " 59 37	min.	16.3	.91 .92	102 21S	+0.9 Jy 17 12	2_o, 8+	"	"	"		"	"	5*	B
763	7/19/62	0730, 0948	"	"	Photom. meas. showed a change of brightness from V_{mag}=3.46 to V=3.07, where av. mag. for that age =3.26, or a brightening of .58 mag.	"	"	" " 59 55	2.25h	17.3	.95 .96	114 9S	+1.8 Jy 17 12	3+,18+	"	"	"		"	"	5*	B
764	7/20/62	0600-0630	Agrippa	11E, 4N	Shadow of c.p. med. gray, wall shad. is normal black.	"	"	" " 60 02	1/2h	18.3	.99 .99	128 41S	+2.8 Jy 17 12	4_o,24-	Bartlett	Baltimore, Maryland	4L,240X	S=3-1 T=4		pc	4*	G
765	7/21/62	0650-0710	"	"	Shadow of c.p. somewhat darker but still grayish, while wall shad. was normal black. C.p. dull, 4° bright.	Jy 20 10 Au 17 08	Au 05 06	60 02 60 50 54 06 59 58	1/3h	19.3	.03 .03	141 28S	+3.8 Jy 17 12	3+,21+	"	"	"	S=5 T=3		"	4*	G
766	7/22/62	0745-0800	"	"	Shadow of c.p. now dark gray but still brighter than wall shadow of normal black. C.p. brightened to 5°.	"	"	" " 59 43	1/4h	20.3	.07	153 16S	+4.8 Jy 17 12	3_o,14+	"	"	"	S=2 T=5		"	4*	G
767	9/5/62	0048-0055	vicinity of Walter	4:E, 34:S	Faint pt. of light nr. terminator. (illum. pk. in dark?).	Au 17 08 S 14 16	S 01 19	60 50 61 22 53 58 54 38	7m	6.0	.63 .66	339 17R	-9.2 S 14 04	4_o,24_o	Chalk U.S.?					247	1	B

No.	Date	UT	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Info. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ , β		m d h	m d h	π_p π_a π		d	π, d	°	d, m d h	K_p, ΣK_p			Ap K Pw					
								1900 A. D.														
768	9/9/62	0142-0200	Agrippa	11 E, 4N	Shadow of c.p. grayish, not much darker than floor, est. at 3° bright, whereas on July 12, 1962 at 28° col. in 5-in telescope shad. was normal black & sharply defined against floor which was 3° bright.	Au 17 08 S 14 16	S 01 19	60 50 61 22 53 58 57 34	1/3h	10.0	.80	29 18R	-5.2 S 14 04	3+, 19_0	Bartlett	Baltimore, Maryland	5L, 180X	S=5-4 T=3		pc	4*	G
769	9/15/62	0542, 0824	Taruntius	46E, 7N	Crater faded from V_{mag} =3.21 to 4.04, a .82 mag diff. in 2.5h (Photom. meas.) Av. mag. for this age is 4.03 so crater had brightened 2X normal.	S 14 16 O 13 03	S 29 01	61 22 61 26 53 55 61 18	2.5h	16.2	.03 .02	103 31S	+1.0 S 14 04	4_0, 23-	Wildey, Pohn	Mt. Wilson, California	60L, photom.		Cl	390	5*	B
770	9/16/62	0805			Spectrum, UV emiss. in H &K lines compared with sun, Jupiter, & Mars. II-AO plates, 6A/mm dispersion. Fraunhofer lines much shallower than planetary ones, (whole moon).	"	"	" " 61 03		17.2	.07 .06	117	+2.1 S 14 04	3+, 18-	Spinrad	Victoria, B.C.	48L			248	5*	V, G
771	10/18/62	0100-0200	Aristarchus	47W, 23N	Activity.	O 13 03 N 10 14	O 26 04	61 26 60 58 53 58 58 12	1h	9.3	.18	22 25R	-5.2 O 13 12	6+, 34-ms?	Adams	Missouri	10L, 57X			pc	1	
772	12/9/62	0736, 0742	O. Procell., Aristarchus	60:W, 5S 47W, 23N	O. Proc. was 1.13 mag. brighter than normal. Obs. at SR & is abnormal if area meas. was mare. If it were an E-facing wall it might be normal. Aris. was .80 mag. (2X) fainter than av. for this age. (photom. meas.). V_{mag}=3.80, av.=3.00	D 08 17 Ja 04 08	D 20 11	60 05 59 16 54 11 60 03		12.0	.00 .02	58 11R	-1.1 D 11 10	4-, 12-	Wildey, Pohn	Mt. Wilson, California	60L, Photom.		Cl	390	5*	D
773	1962-1963		Bessel ray	18:E, 24:N	Manchester scientist reported that this ray gave strongest effects of luminescence recorded prior to Aris. -Kepler-Copern. region Nov1-2, 1963 (photom.), see # 779.										Kopal? & Rackham?	Manchester, England				249	5*	B
774	7/6/63	2100:	Riccioli	76W, 3S	During ecl. dimensions of dark spot suddenly increased as it entered the shadow & then it merged with the shad. (midecl. at 2203).	Je 19 08 Jy 16 18	Jy 01 06	60 25 59 37 54 11 56 00	mins?	15.3	.63	90 14R	0.0 Jy 06 22	6-, 24_0	Chernov	Russia			F, C	387	1	D
775	7/6/63	2300:	Atlas	44E, 47N	2 large spots not vis. in penumbra after totality.	"	"	" " "	"	"	"	90 135R	"	"	"	"			"	"	2	B
776	10/5-/63 6	2335-0045	Aristarchus, Kepler, Copernicus	47W, 23N, 37W, 7N, 20W, 9N	Strong luminescence, @ 30% of total light recorded photo-electrically at Hα, NaD, & Fe (RMT 15) λλ 5397.1, 5429.7, 5434.5, 5446.9, 5501.5, 5506.8 AEffect strongest in Aris. region in green at 5450A	O 04 15 N 02 00	O 20 02	60 54 61 26 53 58 60 53	> 1h	17.1	.02 .04	125 112S, 102S, 85S	+1.9 O 03 05	3+, 15-	Scarfe	Cambridge, England	36L	hazy, high cirrus	P	249	5*	B, V
777	10/22/63	2100?	Posidonius	29E, 32N	Posid. A's shadow was not seen when it should have been.	"	"	" " 54 26		5.2:	.59: .64:	332: 1:R	-9.7: N 01 14	1_0, 5-ms-2	Andre	Belgium	2.25R?			250	3*	G
778	10/30/63	0150-0215, 0115-0220, 2200?	Aristarchus Cobra Head Copernicus	47W, 23N 48W, 24N 20W, 9N	Ruby-red spots, brilliant, sparkle, movement. Pink on rim later, violet 3h later. (this & their Nov. obs. started the modern interest & observing the moon). Jamieson didn't see anything until 0115, Greenacre & Barr event 0158-0205. (indep. confirm.) Greenacre did not see it in. 12-inR finder. Cobra Head spot 2X8km, Aris. 19X2km. Scarfe rep. 30% enhancement at 5400A in spect. at Aris., Cop.	"	"	" " 58 20	3h	12.6	.79 .89	60 13R, 12R, 70 50R	-2.4 N 01 14 -1.6	8-, 25_0 ms	Greenacre, Barr, Jamieson, Budine, Farrell Scarfe	Flagstaff, AZ, Binghamton, New York Cambridge, Eng.	24R 4R, 300×	S=F S=3-4	Sh	251 411	5*	R, B, V
779	11/1-/63 2	2235-2242, 0020-0035	Aristarchus, Kepler, Copernicus	47W, 23N 37W, 7N 20W, 9N	Enhancement in red light. Photos. Filters centered on 6725 & 5450A. Luminescence ≈86% ±3% of background. Moore noted something unusual at 2230-0300. Photometric obs. (indep. confirm.)	N 02 00 N 30 13	N 16 06	61 26 61 25 53 56 61 26	4h	15.5	.00 .00	95 48R, 58R, 75R	+0.4 N 01 14	5_0, 23+ ms? flares	Kopal, Rackham, Moore	Pic du Midi, France, England	24R 12L?			252	5*	B, R
780	11/2/63	0000?			(Line-depth spectral anomaly ?) (confirm. of Kopal, et al ?).	"	"	" " 61 26 61 16		"	"	95:	"	"	Scarfe	Cambridge, England			Bl	253	5*	B?
781	11/4/63	0000?			(Line depth spectral anomaly ?).	"	"	" " 60 48 60 05		17.5:	.07: .07:	119:	+2.4: N 01 14	2+, 13+ ms-2	"	"					5*	B?
782	11/10-/63 11	2335-0032	Kepler, Copernicus	37W, 7N, 20W, 9N	(Date a misprint? should be 11/1/63 ?) SS term. at 25°W, & Copern. in dark)	"	"	" " 5 5 51	1h	24.5	.37 .32	2 0 5 12 S, -5 S	+10.4 N 01 14	4-, 24_0	Kopal	Pic du Midi, France	24R?				0	
783	11/11/63	2330:	Aristarchus	47W, 23N	Reddish-orange. Sparkle in some areas.	"	"	" " 54 46		25.5	.40 .35	217 10S	+11.4 N 01 14	4-, 24_0	Jacobs	Flagstaff, Arizona	24R	S=VG	P	254	3*	R, B
784	11/27/63	0300	Aristarchus, Anaximander	47W, 23N 50W, 55N	Red glow in dark part of moon. (indep. confirm. ?).	"	"	" " 59 38		10.8	.83 .88	42 -5R	-3.9 D 01 00	2+, 4+	Olivarez, Fisher	New Jersey? Colfax, CA	17L 8L, 300×		MBDC	pc	5*	R, B
785	11/28/63	0030-0145	Aristarchus	47W, 23N	Reddish-orange & sparkle on rim, c.p. W. (IAU ?) side, blue on floor later. (indep. obs.) (not seen by Cyrus at 0225-0230).	pix "	"	" " 60 26	1.25h	11.7	.88 .90	53 5R	-3.0. D 01 00	3+, 9+	Greenacre, Barr, Hall, Dungan; Tombaugh, Olivarez	Flagstaff, AZ New Mexico New Jersey?	24R 69L 16L, 524× 17L			255	5*	R, V, B

No.	Date	Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ , β		m d h	m d h	π_p π_a π		d	m d	°	d, m d h	$K_\odot$, $\Sigma K_\odot$			Ap K Pw					
								1900 A.D.														
786	12/ 4/63				Line depth anomaly? luminescence?	N 30 13 D 29 00	D 13 09	61 26 59 37 60 53 53 58 58 40		17.7:	.12:	125:	+3.0: D 01 00	5_0, 30+ sc+2	Scarfe	England			Bl	253	5*	B?
787	12/27/63	0555- 0610	Herodotus	48W, 22N	E. outer wall looked reddish or brownish in poorer moments of seeing.	"	"	" " 60 26	1/4h	11.2	.88 .95	48 0 R	-3.3 D 30 11	2+, 9- ms-2	Haas	Las Cruces, New Mexico	12.5L	S=P-F	?	256	1	R
788	12/28/63	0115- 0200	Aristarchus, Schroter's Valley	47W, 23N 48W, 24N	In poorer moments of seeing, red on Aris. rim & Sch. Valley. Spurious seeing effects?	"	"	" " 60 45	3/4h	12.0	.93 .98	58 11R, 10R	-2.4 D 30 11	4-, 24_0 ms-1	Olivarez	Edinburgh, Texas?	17L		MBDC	256	1	R
789	12/28/63	1555- 1626	Aristarchus, Herodotus	47W, 23N 48W, 22N	Red area, spreading to Herod., a peculiar obscuring gray area on N. edge of glow. Drawing. (confirm. of Olivarez? with activity > 1/2 day?)	"	"	" " 60 51	1/2h	12.8	.96 .99	65 18R, 17R	-1.9 D 30 11	4-, 19- ms-1	Yamada, et al	Hiroshima, Japan	10L, 278X		"	257	5*	R, G, B
790	12/29/63				Color photometry? or infrared?	D 29 00 Ja 26 01	Ja 10 00	60 53 60 53 59 58 54 05 60 44		12.9:	.00: .00:	69:	-1.5: D 30 11	4_0, 24_0 ms	Coyne	College Park, Maryland?			Bl	253	5*	R?
791	12/29-/63 30	2200- 0300	Aristarchus	47W, 23N	Several saw color in crater. All agreed it was purple-blue. Sketch.	"	"	" " 60 43	5h	13.9	.05 .03	82 35R	-0.5 D 30 11	4-, 24_0	Doherty, et al	Stroke-on-Trent, Eng.	3R, 8L, 10L		MBDC	pc Moto Gr	5	V
792	12/30/63	1100	NE limb	90E, ?	Red glow on NE (IAU?) limb. Direct photo during ecl. (ecl. geom. ?).	"	"	" " 60 32	1/3h	14.4	.07 .05	90 0S?	0.0 D 30 11	2+, 11_0 ms+1	many					258	1	R, B
793	1/ 1/64				Enhancement in spectra? luminescence?	"	"	" " 59 38 58 48		15.9:	.11:	108:	+1.5: D 30 11	2+, 12+ sc	Scarfe	England			Bl	253	5*	B?
794	1/ 5/64	2200?	Aristarchus	47W, 23N	Purplish-blue.	"	"	" " 55 16:		20.8:	.29:	166: 61:S	+6.4: D 30 11	3-, 16-	Doherty	Stroke-on-Trent, Eng.	3R, 8L, or 10L?			pc	3	V
795	1/ 6/64	0200?			Anomalous IR radiation on the moon.	"	"	" " 55 20:		21.0:	.29:	168:	+6.6: D 30 11	2+, 11+	Markov, Khoshlova	Russia				315	5*	R, B
796	1/24/64	2000?			Spectra? luminescence?	"	"	" " 59 48:		9.1:	.96: .96:	25:	-5.0: Ja 28 23	4-, 20_0	Scarfe?	England			Bl	253	5*?	B?
797	1/27/64	2100?			Spectra? luminescence?	Ja 26 01 F 21 08	F 06 20	59 58 59 14 54 13 59 38:		12.1:	.08: .07:	62:	-2.0: Ja 28 23	2_0, 7+ ms-1	Scarfe?	"			"	"	5*?	B?
798	1/28/64	2100			Spectra? luminescence?	"	"	" " 59 10:		13.1:	.11:	74:	-1.0: Ja 28 23	3+, 17_0 sc	Scarfe?	"			"	"	5*?	B?
799	2/ 2/64	2240:	Ross D	23E, 12N	Crater doubled.	"	"	" " 55 25:		19.0:	.30:	146:	+4.9: Ja 28 23	3_0, 14:	Harris	Whittier, California	19L?		Las Cru. mtg. rept.		1	G
800	2/19/64	0400?	SE of Ross D	24:E, 11N	Variations in the ring.	"	"	" " 59 04:		5.7:	.92:	344: 8:R	-8.3: F 27 13	1_0, 3:	"	"	"		"		1	G
801	2/22/64	0600?			Appearance of a ring. (7 persons have seen this over a 2.5 yr. period).	F 21 08 Mr 17 16	Mr 05 17	59 14 59 42 54 15 59 12:		8.8:	.08:	9:	-5.2: F 27 13	3_0, 15: sc+2	"	"	", 100×		"		1	
802	2/25/64	0237- 0238, 0239- 0242	Cobra Head, Aristarchus	48W, 24N 47W, 23N	Red flashes.	"	"	" " 58 40	5m	11.5	.11 .15	56 8R, 9R	-2.4 F 27 13	6-, 23_0 ms?	Budine	Binghamton, New York	4R, 250X	S=6 T=4	ALPO		3*	R, B
803	3/16/64	2358	Aristarchus	47W, 23N	Sudden red glow on SW rim in dark part of moon.	"	"	" " 59 41		2.9	.98 .97	310 -97R	-11.1 Mr 28 03	3+, 16+	Lecuona	Madison, New Jersey	--, 225X	S=G	MBDC	247 p35	3*	R, B
804	3/18/64	0059	"	"	Flash(es?).	Mr 17 16 Ap 14 10	Ap 02 12	59 42 60 34 54 10 59 42	•	3.9	.01 .01	323 84R	-10.1 Mr 28 03	2-, 6+	Earl & bro.	St. Petersburg, Fla.	2.4R, 35X	S=VG	"	pc	2	B
805	3/21/64	0400?	nr. Ross D	24:E, 11N		"	"	" " 58 56		7.1:	.13:	1: 25:R	-6.9: Mr 28 03	4-, 19_0	Harris?	Whittier, California?			Las Cru. mtg. rept.		0	
806	3/26/64	0027- 0047	Aristarchus	47W, 23N	Floor: blue clay color.	"	"	" " 56 50	1/3h	11.9	.28 .30	60 13R	-2.1 Mr 28 03	4_0, 18-	Bartlett	Baltimore, Maryland	4L, 240X	S=5 T=2		210	4	V
807	3/28/64	0140- 0218	"	"	Blue-violet glare on E. & N. walls & EWBS; violet tinge on nimbus.	"	"	" " 55 50	1/2h	14.0	.33 .37	85 28R	-0.1 Mr 28 03	0_0, 1-	"	"	5L, 180X	S=5 T=3		210	4	V
808	4/21/64	0423- 0501	Ross D	23E, 12N	Obscuration of its rim.	Ap 14 10 My 12 16	Ap 30 02	60 34 61 11 54 03 58 57	2/3h	8.7	.24	19 42R	-5.5 Ap 26 18	4-, 16+	Capen?	California					4*	G
809	4/23/64	0400:	Ross D vicinity	23:E, 12N	Gas cloud over it & its companion; everywhere else was fine detail. (MBMW has it as Apr. 22, but is 23rd UT).	"	"	" " 56 25		10.7	.30 .31	35 58:R	-3.5 Ap 26 18	1+, 6+	Cross, et al	Whittier, California	19L, 800X, 500×, 200× filters	S=G	AADC	pc	5*	G
810	4/26/64	2000?	nr. Censorinus	33:E, 1:S	Surface brightening somewhat similar to Kopal & Rackham in # 779	"	"	" " 54 36		14.3:	.38: .44:	91: 57:S	+0.1 Ap 26 18	4-, 18_0 ms?-1	Hopmann	Czechoslovakia?			MBMW	pc to M	3*	B
811	5/18/64	0354- 0453	nr. Ross D	23:E, 12:N	White gas obscuration. Moved 20mph, decreased in extent. Phenom. repeated. Drawing.	My 12 16 Je 10 02	My 27 09	61 11 61 21 53 59 58 11	1h	5.9	.22 .19	342 5R	-8.2 My 26 09	2+, 10_0	Harris, Cross et al.	Whittier, California	19L, 720× 8L, 322×	S=8	AADC	pc to M	5*	G
812	5/18/64	0105- 0015	Theophilus	26E, 11S	Crescent of crimson color on SW between rim & floor. Was not present at 0500, nor did it reappear from 0115 to 0245h.	"	"	" " "	10m	5.8	"	341 7R	-8.3 My 26 09	"	Dieke	Baltimore, Maryland	6R, 125×			247 p44	3*	R
813	5/20/64	0100- 0130	Plato	9W, 51N	Orange-red color on W. wall. Vivid.	"	"	" " 56 26	1/2h	8.1	.31 .26	11 2 R	-6.4 My 26 09	1+, 6-	Bartlett	"	2.4R, 117×	S=6 T=5	ALPO		4*	R, B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ρ		m d h	m d h	π_p π_a π		d	π' d	°	d m d h	K_p, ΣK_p								
								1900 A.D.														
814	5/26/64	0410-0435	Aristarchus	47W, 23N	Strong blue-viol. gl. on E. wall & EWBS, strong viol. tinge on nimbus. Crater was hazy, could not focus it in red, green, or blue filters.	My 12 16 Je 10 02	My 27 09	61 11 61 21 53 59 54 04	1/2h	14.3	.46 .48	86 39R	+0.2 My 26 09	4-,12+ sc+2	Bartlett	Baltimore, Maryland		S=5 T=5		210	4*	V, B, G
815	5/28/64	0525-0552	"	"	Blue-viol. gl. on E, & NE wall. Dark viol. hue on nimbus.	"	"	" " 54 02	1/2h	16.3	.52 .55	112 115S	+1.8 My 26 09	3-,16_o	"	"	4L, 240×	S=4-5 T=2		"	4	V
816	5/30/64	0710-0752	"	"	Bright blue-viol. gl. on EWBS, E. & NE walls. Dark viol. on nimbus.	"	"	" " 54 24	3/4h	18.4	.57 .62	137 90S	+3.9 My 26 09	3+,12_o sc-2	"	"		S=3 T=3		"	4	V
817	6/6/64	0820-0910	Aristarchus, Herodotus, Schroter's Valley	" 48W, 22N 48W, 24N	2 red spot glows, glimmer, looked like ruby gems. (date predicted by Greenacre & looked for).	"	"	" " 59 23	50m	25.5	.82 .86	233 6S, 5S, 5S	+10.9 My 26 09	2_o, 7_o	Schmidling, St. Clair, Platt	Riverdale, New York	8L, 256×		MBDC	pc	5*	R, B, G
818	6/17/64	0415-0501	nr. Ross D	23:E, 12:N	Gas cloud. Motion.	Je 10 02 Jy 08 11	Je 23 12	61 22 61 04 54 00 56 21	3/4h	7.0	.31 .25	355 18R	-7.8 Je 25 01	2-, 7+	Cross, et al	Whittier, California	19L?	S=7-8	AADC	pc	4	G
819	6/21/64	0343-0544	S. of Ross D	24:E, 11N	Moving dark area.	"	"	" " 54 16	2.h	11.0	.43 .39	44 68R	-3.8 Je 25 01	4_o.18-	Harris, Cross, Helland	"	19L		M	pc to M	4	D
820	6/21/64 ?	2118	Aristarchus	47W, 23N	Polarization meas. with electron polarimeter. Plane of polariz. rotated 2° fr. th e adjacent areas. They interpret it as some scattering medium over the crater. (source gave date as 6/31/64, misprint =21st ?).	"	"	" " 54 07		11.5	.45 .41	51 4R	-3.2 Je 25 01	4_o, 18-	Lipskii, Pospergelis	Shternberg State Ast. Inst.	AZI-2L Cass.			266	5*	G
821	6/23/64	0445-0505	"	"	Blue-viol. gl. on NE rim; strong viol. tinge in nimbus. Absent 1h earlier.	"	"	" " 54 00	1/3h	13.0	.49 .46	76 29R	-1.8 Je 25 01	2+,12+?	Bartlett	Baltimore, Maryland	5L, 180×	S=4-1 T=3		210	4	V
822	6/25/64	0100-0200	", Grimaldi	", 65W, 5S	Aris. very bright during ecl. White streak from Grimaldi to limb.	"	"	" " 54 06	1h	14.8	.53 .53	90 43R, 25R	0.0 Je 25 01	4_o,17-	Titulaer, Azevado	Brazil				pc	4*	B
823	6/25/64	0405-0435	Aristarchus	47W, 23N	Blue-viol. gl. on EWBS & NE wall. Faint viol. tinge on nimbus. (confirm. ? of activity here this nite. Date in MBMW & ref. 210 are misprinted as 10/25/64 p.c. from Bartlett verifies date as June).	"	"	" " 54 07	1/2h	15.0	"	93 46R	+0.2 Je 25 01	"	Bartlett	Baltimore, Maryland	4R, 4L, 5L, 180×	S=4 T=2-3		210	4*	V, B
824	6/26/64	0510-0538	" vicinity	"	Dark viol. on nimbus; pale viol. on m; absent from crater.	"	"	" " 54 20	1/2h	16.0	.54 .57	106 121S	+1.2 Je 25 01	2_o, 11+	"	"		S=5 T=4		"	4	V
825	6/27/64	0520-0557	"	"	Dark viol. on nimbus; bright blue-viol. on EWBS, E., & NE rims.	"	"	" " 54 37	1/2h	17.0	.58 .60	118 109S	+2.2 Je 25 01	2_o, 11-	"	"	4L, 240×	S=5 T=4		"	4	V, B
826	6/28/64	0557-0625	"	"	Blue-viol. gl. on EWBS, E., N., & NW walls. Brown tinge on floor.	"	"	" " 54 58	1/2h	18.0	.61 .64	131 96S	+3.3 Je 25 01	4-,17+	"	"	5L, 180×	S=5 T=4		"	4	V, R
827	6/29/64	0705-0733	"	"	(Viol. glare ?) suspected on EWBS, but too faint to be certain. S. part of floor was granulated & a coppery tint.	"	"	" " 55 27	1/2h	19.1	.64 .68	143 84S	+4.3 Je 25 01	3-,12_o	"	"	4L, 240×	S=5 T=4		"	4	V, R
828	6/30/64	0550-0610	"	"	Nimbus only--dark viol. hue. S. part of Aris. floor was granulated & a brown tinge--changed to yellow-brown at 0600. First time he ever saw such change in color. (this obs. listed in 210 & MBMW as June 20, but is a misprint).	"	"	" " 56 00	1/3h	20.0	.66 .71	155 72S	+5.2 Je 25 01	2-, 6+ sc-2	"	"				"	4*	V, R
829	7/5/64	0745-0805	"	"	Deep ravine on E. glacis obscured for most of its length. Short segment on SE wall alone was visible.	"	"	" " 59 48	1/3h	25.1	.84 .89	217 10S	+10.3 Je 25 01	2+,10_o sc-2	"	"	"	S=5 T=5		pc	4*	G
830	7/17/64	0500?	SE of Ross D	24:E, 11:N	Temporary "hill" est. 3km diam. & shadow seen. (date =16th in MBMW but is 17th UT).	Jy 08 11 Au 05 15	Jy 20 21	61 04 60 24 54 05 55 03		7.7:	.37: .31:	2: -26:R	-7.5: Jy 24 16	6-,22+ ms?	Cragg	Mt. Wilson, California	12L?		MBMW		4*	G
831	7/18/64	0216	Plato	9W, 51N	Faint pink bands at base of inner W. wall & on rim of N. wall. (17th in MBMW but must be 18th UT as Plato not vis. on 17th).	"	"	" " 54 38		8.6	.41 .34	13 4R	-6.6 Jy 24 16	6-,22+ ms?	Bartlett	Baltimore, Maryland			"		4*	R
832	7/18/64	0530-0840	SE of Ross D	24:E, 11N	Bright area expanded--used amber filter.	"	"	" " 54 34	1h	8.7	.42 .34	15 38R	-6.5 Jy 24 16	5_o,29_o	Harris, Cross, Quigley, Parrish	Whittier, Calif.	19L, 390×		AADC		5	G
833	7/19/64	0216	Plato	9W, 51N	Faint pink tinge to W. wall. Drawing. (MBMW has 18th, but probably 19th UT or else 17th (# 831) is an error. Same obs. reported twice ? one in loc. time & other in UT ?).	"	"	" " 54 18		9.6	.44 .37	25 16R	-5.6 Jy 24 16	4_o,18:	Bartlett	Baltimore, Maryland	4L, 240×		ALPO		4*	R
834	7/21/64	0200-0223	Aristarchus	47W, 23N	Deep ravine on E. glacis interrupted midway of its length by apparent break just below rim of crater let assoc. with EWBS. Normally, ravine is seen continuous. Probable obscuration at pt. of break.	"	"	" " 54 05	1/3h	11.6	.51 .45	50 3R	-3.6 Jy 24 16	3-,13- ms+2	"	"	5L, 180×	S=7 T=5		pc	4*	G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist.	Days fr. FM & d,	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ° ρ °		m d h	m d h	π_p ' " π_s ' " π ' "		d	°	°	m d h	K_p, ΣK_p			Ap K Pw					
								1900 A. D.														
835	7/23/64	0445-0507	Aristarchus	47W, 23N	S. region of floor was granulated & rated 6° bright, rest of crater 8°. Floor there was distinctly yellow-brown. Had never seen browns or yellows before June 28, 1964. (seeing true color of ground?).	Jy 08 11 Au 05 15	Jy 20 21	61 04 60 24 54 05 54 23	1/3h	13.7	.56 .52	75 28R	-1.5 Jy 24 16	$2_o, 11_o$	Bartlett	Baltimore, Maryland	5L, 180×	S=1-4 T=3		pc	4	R,D
836	7/27/64	0455-0510	"	"	E. region again granulated, rated 6° on grayish background. No color. SWBS seen on 24th no longer vis.	"	"	" " 55 52	1¼h	17.7	.65 .66	124 103S	+2.5 Jy 24 16	1-, 4-ms-2	"	"	4L, 240×	S=7 T=2		pc	4	D
837	7/28/64	0430-0457	"	"	Blue-viol. gl. on EWBS; dark viol. on nimbus; pale viol. on m.	"	"	" " 56 22	1/2h	18.7	.69 .70	136 91S	+3.5 Jy 24 16	1+, 4+ ms-1	"	"	"	S=7 T=3		210	4	V
838	7/29/64	0540-0606	"	"	Nimbus only--dark viol. hue. S. floor granulated, dull--6° bright. Faint yellow-brown tinge. Rest of crater 8°.	"	"	" " 56 57	1/2h	19.8	.71 .74	149 78S	+4.5 Jy 24 16	5-, 22+ ms	"	"		S=6 T=3-2		210	4	V,R,D
839	7/31/64	0517-0548	"	"	Pale blue tint on NE, N, & NW walls & floor.	"	"	" " 58 08	1/2h	21.8	.77 .81	174 53S	+6.5 Jy 24 16	3-, 16- ms+2	"	"		S=4 T=3		"	4 3	V
840	8/16164	0418-0520	SE of Ross D	24E, 11N	Bright area. Condensations varying with time.	Au 05 15 S 02 02	Au 17 12	60 24 59 35 54 12 54 21	1h	8.4	.45 .38	8 32R	-7.0 Au 23 06	$2+, 13_o$ sc	Harris, Cross	Whittier, California	19L?		MBMW		3	B,G
841	8/19/64	0400-0430	Aristarchus	47W, 23N	Ravine on E. glacis appeared obscured for 2/3 its length N. of EWBS rim. (E. rim on term. ?).	"	"	" " 54 24	1/2h	11.4	.56 .50	45 -2R	-4.0 Au 23 06	$2_o, 10+$	Bartlett	Baltimore, Maryland	4L, 240×	S=4-3 T=3		pc	4*	G
842	8/24/64	0410-0435	"	"	Bright blue-viol. on EWBS, E., & NE wall.	"	"	" " 56 34	1 /2h	16.4	.71 .67	106 121S	+1.0 Au 23 06	1+, 6_o	"	"		S=7 T=3		210	4	V
843	8/25/64	0450-0500	"	"	Bright blue-viol. on EWBS, E., & NE rim; dark viol. nimbus. S. region almost as bright as rest of crater, 8°, yellow-brown & granulated.	"	"	" " 57 04	10m	17.4	.73 .71	119 108S	+2.0 Au 23 06	$3_o, 15_o$	"	"		S=1-3 T=4-0		"	4*	V,R
844	8/26/64	0200-0300	"	"	Red & blue bands. Grew thinner & shorter. Alerted Naval Obs. One obs. tho't he saw Phenom. but n ot sure. (confirmation ?). (prof. astronomers, but not lunar observers).	"	"	" " 57 31	1h	18.3	.76 .74	129 98S	+2.9 Au 23 06	3+, 18+	Genatt, Reid Lindenblad	Greenbelt, Md. Washington, DC	16L, 360× 26R	S=P-F	G MBDC	pc	5*	R,V
845	8/26/64	0403-0430	"	"	Blue-viol. gl. on EWBS, E., & NE rim; dark viol. nimbus. (indep. confirm. of Genatt & Reid ?).	"	"	" " 57 33	1/2h	18.4	"	131 96S	+3.0 Au 23 06	"	Bartlett	Baltimore, Maryland	4L, 240×	S=3-4 T=3		210	5*	V
846	8/27/64	0430-0445	"	"	Blue-viol. gl. on E., NE wall & EWBS; dark viol. on nimbus; pale viol. on m.	"	"	" " 58 00	1/4h	19.4	.78 .78	143 84S	+4.0 Au 23 06	3-, 16_o	"	"	"	S=3-4 T=3		"	4	V
847	8/28/64	0430-0450	"	"	Faint blue-viol. radiance on EWBS; dark viol. on nimbus. S. floor dull, 6°, granulated, distinct yellow-brown; rest of crater 8° bright.	"	"	" " 58 24	1/3h	20.4	.80 .82	155 72S	+5.0 Au 23 06	2-, 5-	"	"		S=5-4 T=3		"	4*	V,R,G, D
848	9/18/64	0105-0126	"	"	Craterlet at base of NW wall was bluish.	S 02 02 S 27 05	S 14 07	59 35 59 20 54 16 55 23	1/3h	11.9	.64 .63	50 3 R	-3.7 S 21 18	2-, 11-	"	"	4R, 4L, 150×	S=5-6 T=2		"	4	V
849	9/20/64	0415-0450	" , Herodotus	" 48W, 22N	Several red spots in area between the 2 craters. No change in phenom. so stopped observing.	"	"	" " 56 43	1/2h	14.0	.73 .72	80 29R	-1.5 S 21 18	1+, 3_o sc-1	Crowe, Cross	Whittier, California	19L, 390×	S=F-G	AADC	pc	5*	R
850	9/20/64	0455-0500	nr. Ross D	23E, 12N	Opaque, outgassing, obscuration.	"	"	" " "	5m	"	"	80 103R	"	"	Harris, Cross	"	" , 250×	S=F , S=4-5	"	"	5*	G
851	9/22/64	0254-0303	Aristarchus	47W, 23N	Bright blue-viol. gl. on NE rim & EWBS; dark viol. nimbus; S. floor 8° br. rest of crater 7°. Red-brown, changed to coppery, to yellow-brown. (Gilheany, et al. examined crater later, but did not detect any color in MOON BLINK, so red-brown must have disappeared).	"	"	" " 57 52	10m	16.0	.80 .80	100 127S	+0.4 S 21 18	8-, 29_o ms, sc+1	Bartlett	Baltimore, Maryland	4L, 240×	S=5 T=5		210	4	V,B,R
852	9/22/64	0325-0430	Kunowsky	32W, 3N	Red area detected by Trident's MOON BLINK (MB) device. (Aris. normal).	"	"	" " "	1h	16.1	"	100 112S	"	"	Gilheany, Johnson	Hall, Port Tobacco, Maryland	16L	S=G	MBDC	259	5*	R
853	9/23/64	0320-0340	Aristarchus	47W, 23N	Blue-viol. gl. on E., NE, N., NW walls & on EWBS.	"	"	" " 58 23	1/3h	17.0	.83 .84	112 115S	+1.4 S 21 18	4-, 15- ms+1, sc+2	Bartlett	Baltimore, Maryland		S=6 T=5		210	4	V
854	9/24/64	0320-0340	"	"	Crater white bright 8°, but duller (7°) in S. floor region where a pale yellow-brown tint was seen.	"	"	" " 58 49	1/3h	18.0	.87 .88	124 103S	+2.3 S 21 18	3+, 17-	"	"	4L, 50, 120, 240×	S=6 T=5		p c	4	R
855	9/25/64	0355-0415	"	"	Blue-viol. gl. on EWBS; dark viol. on nimbus.	"	"	" " 59 07	1/3h	19.0	.90 .92	137 90S	+3.5 S 21 18	3-, 9_o	"	"		S=5-1 T=5		210	4	V
856	9/26/64	0500-0515	"	"	Moderately intense (viol. gl. ?) on EWBS; dark viol. on nimbus.	"	"	" " 59 17	1/4h	20.1	.97 .96	144 78S	+4.5 S 21 18	$2_o, 7_o$	"	"		S=5 T=5		"	4	V
857	10/19/64	0155-0210	"	"	Blue glare on E. part of floor.	S 27 05 O 23 22	O 12 03	59 20 60 04 54 13 57 50	1/4h	13.4	.86 .82	68 21R	-2.1 O 21 05	5-, 31-	"	"	4L, 240×	S=4 T=3	ALPO mtg. draw	displ.	4	V
858	10/22/64	0210-0215	"	"	Blue-viol. gl. on E., NE wall & EWBS; dark viol. on nimbus	"	"	" " 59 44	5m	16.4	.94 .93	105 122S	+0.9 O 21 05	2-, 7_o	"	"		S=I T=2.5		210	4	V

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref	Wt.	Phenom. Type
	m d y	h m		λ β		m d h	m d h	π_p π_a π ' " ' " ' " 1 9 0 0 A.	D.	d	π, d	°	d, m d h	Kp, ΣKp			Ap K Pw					
859	10/23/64	0235- 0245	Aristarchus	47W, 23N	South floor region granulated, 6° bright with very faint trace of pale yellow color; rest of crater 8° bright.	S 27 05 O 23 22	O 12 03	59 20 60 04 54 13 60 02	10m	17.4	.97 .97	117 110S	+1.9 O 21 05	0+, 1_o	Bartlett	Baltimore, Maryland	3R, 133, 200×	S=3-5 T=4		pc	4	R, D
860	10/24/64	0400- 0405	"	"	Blue-viol. gl. on E., NE wall & EWBS; faint viol. tinge on nimbus.	O 23 22 N 21 00	N 08 22	60 04 60 57 54 05 60 06	5m	18.5	.01 .01	130 97S	+3.0 O 21 05	3_o, 8+	"	"	4L, 240×	S=4-3 T=5		210	4	V
861	10/25/64	0430- 0445	"	"	Blue-viol. gl. on E, NE wall & EWBS; faint viol. tinge on nimbus.	"	"	" " 59 56	1/4h	19.5	.04 .05	142 85S	+4.0 O 21 05	3-, 8_o	"	"	"	S=5 T=5		pc	4	V
862	10/26/64	0415- 0430	"	"	Nimbus only--dark viol. hue.	"	"	" " 59 39	1/4h	20.5	.09 .08	154 73S	+5.0 O 21 05	5+, 23-	"	"		S=5-3 T=5		210	4	V
863	10/27/64	0518- 0610	Alphonsus	4W, 14S	Red spot. Pink glow detected with Trident MB & seen visually too.	"	"	" " 59 11	52m	21.5	.13 .12	168 16S	+6.0 O 21 05	2+,	Hall, Johnson, Weresuik	Pt. Tobacco, Maryland	16L, 400×	S=5-7	MBDC	259	5*	R, B
864	11/14/64	0100?	Plato	9W, 51N	Peak on E. wall brilliant white, strong blue band at inner base; on S. wall was a small bright red spot.	"	"	" " 56 09		9.7:	.69: .75:	24: 15:R	-5.9: N 19 16	0+, 1_o	Bartlett	Baltimore, Maryland	4L?		ALPO-W	pc	4	V, R, B
865	11/21/64	0150- 0204	Aristarchus	47W, 23N	Bright blue-viol. gl. on NE, N, NW rim.	N 21 00 D 19 11	D 06 12	60 57 61 27 53 58 60 57	1/4h	16.8	.00 .00	110 117S	+1.4 N 19 16	2-, 5_o	"	"	3R, 200×	S=5 T=5		210	4	V
866	11/23/64	0324- 0335	"	"	Strong blue-viol. gl. on N., NE, NW wall; dark viol. on nimbus.	"	"	" " 60 20	10m	18.9	.10 .07	135 92S	+3.4 N 19 16	5-, 26_o	"	"		S=4 T=5		"	4	V
867	11/24/64	0445- 0455	"	"	Blue-viol. gl. on N. rim; dark viol. on nimbus; pale viol. on VA.	"	"	" " 59 41	10m	19.9	.15 .11	148 79S	+4.5 N 19 16	1+, 5-	"	"		S=4 T=5		"	4	V
868	12/19/64	0328- 0428	N. Mare Nubium, S. of Cop.	20:W, 0:	Photoel. photom. of region of N. edge of M. Nub., S. of Copernicus showed strong anomalous enhancement of radiation during ecl. (confirm.).	"	"	" " 61 25		15.0	.98 .99	90 70:R	0.0 D 19 03	3+, 17-	Sunduleak, Stock	Cerro-Tololo, Chile	16L			260	5*	B
869	12/19/64	0235:			Anomalous bright area in ecl. (indep. confirm. of Sanduleak & Stock?).	"	"	" " "		"	"	90	"	"	Hill, et al.				MB		5*	B
870	12/19/64	0313- 0314	Aristarchus	47W, 23N	Brightened 5× during totality.	"	"	" " "	1m	"	"	90 43R	"	"	Budine, Farrell	Binghamton, New York	4R, 120×	S=7 T=5	ALPO-W	259	5*	B
871	/ /64				Fluorecence--Swan bands of C_2 or NH_2										Swings	Liege?, Belgium			M		5*	B, G?
872	3/14/65	0740	SE of Ross D	24E, 13N	Crater wall partially obscured; bright area.	F 14 11 Mr 14 09	F 26 10	60 48 59 54 54 06 59 54		10.9	.99 .00	47 71R	-3.2 Mr 17 12	3-, 13_o	Cross	Whittier?, California?	12L		MBMW	pc toM	3*	G, B
873	4/8/65	2000?	Alphonsus, Linné, Hyginus N, Aristarchus, Proclus	4W, 13S 12E, 27N 6E, 9N 47W, 23N 46E, 16N	Saw variable, shining lights in these 5 features.	Mr 14 09 Ap 09 11	Mr 26 06	59 54 59 14 54 14 59 15		6.8:	.97:	358: -6:R, 10:R 4:R -49:R 44:R	-7.2: Ap 15 23	2-, 7- sc+2	Hoffman	Germany?			Cl	288	1	B, G
873a	4/8/65	2000?	Censorinus	33E, 1S	Green flash or brightening. (date correct? written 8-4-65. First taken as American convention, thus as Aug. 4, but now think it was in European convention of day first then month).	Mr 14 09 Ap 09 11	Mr 26 06	59 54 59 14 54 14 59 15		6.8:	.97:	358: 31:R	-7.2: Ap 15 23	2-, 7- sc+2	Hopmann	Czechoslavakia?			Cl	263	2	V, B
874	4/14/65	0603- 0622	Ross D	23E, 13N		Ap 09 11 My 05 01	Ap 23 01	59 14 59 45 54 16 58 13	1/3 h	12.3	.19	68 91R	-1.7 Ap 15 23	2_o, 10-	Harris	Whittier?, California?	19L?		ALPO mtg.	rept.	0	
875	5/8/65	0547- 0559	Alphonsus	4W, 13S	Light flashes on c.p. color detected by Trident MB.	My 05 01 Je 01 18	My 20 20	59 45 60 34 54 10 59 06	12m	6.7	.12 .12	357 -7R	-7.3 My 15 12	4+, 17-	McLarin	Huntsville, Alabama	16L	S=9	MBDC	259	5*	B, G, R
876	5/15/65	0140- 0215:	Aristarchus	47W, 23N	Crater had color (red?) detected by Trident MB & photos were obtained. There were pulsations. Delano saw E. wall of crater unusually bright. (confirm. if at same time).	"	"	" " 55 58	1/2h	13.5	.32 .36	80 33R	-0.4 My 15 12	2_o, 8+ sc-1	Weresuik, McClench, Johnson, Delano	Pt. Tobacco, Maryland " Massachusetts	16L, 240× 12L	S=F T=G	MBDC	"	5*	R?, G, B
877	5/18/65	0300- 0330				"	"	" " 54 39		16.6	.39 .47	119	+2.6 My 15 12	2_o, 8-	Cragg	Mt. Wilson?, California	6R?				4	
878	6/8/65	0245- 0250	Plato	9W, 51N	Dome-like feature, sketched by Herring & confirmed by Photo by Larson. Never seen before by Herring in hundreds of obs. No other repts. of this. Photo at 0250h.	Je 01 18 Je 30 00	Je 17 10	60 34 61 11 54 03 57 30	5m	8.2	.20 .23	14 5R	-6.0 Je 14 02	4-, 16_o	Herring, Larson	Tucson, Arizona	12.5L, 410× 5.5R	S=4-5	Bl	261	5*	G
879	6/11/65	2135- 2140	Herodotus	48W, 22N	Red glow in crater at 2140, then clouds stopped obs. After clouds, floor was abnormal rose color.	"	"	" " 55 11	> 1/2h	12.0	.37 .36	61 13R	-2.3 Je 14 02	3-, 9_o	Porta, Garau	Mallorca, Baleares	4R, 250×		M	pc to M	5*	R
880	6/12/65	> 0000	Herodotus, Cobra Head	48W, 22N 48W, 24N	Area expanded, color went to rose. Next nite floor was normal. In filters, phenom. accentuated in orange.	"	"	" " 55 23		12.4:	.38: .36:	63: 15:R	-2.1: Je 14 02	1o, 6+							3*	R, G
881	7/2/65	0420- 0550	Aristarchus	47W, 23N	Star-like flashes to patchy blotches in ashen light; 4th mag. in brightness. (indep. confirm. ?--date in MBMW is 7/1/65 which is loc. time +2nd UT).	Je 30 00 Jy 28 09	Jy 14 17	61 22 61 22 53 58 60 28	1 1/2h	3.0	.12 .08	308 -99R	-11.5 Jy 13 17	2_o, 12-	Albert, Welch, Emanuel	Azusa, West Covina, California	8L, 375× 4.5L		AADC	259	3	B
882	7/3/65	0425- 0534	"	"	Star-like flashes, pulsation, 4th mag. brightness. (confirmed. Date in MBMW is 7/2/65 =loc. time =3rd UT).	"	"	" " 59 47	>1h	4.0	.15 .11	320 -87R	-10.5 Jy 13 17	2+, 11_o	"	West Covina, California	4.5L		"		3	B, G
883	7/4/65	0353- 0559	"	"	Star-like flashes. (confirmed. Date in MBMW =7/3/65=loc. time=4th UT. MBMW has this in as 7/9/65 also but is error due to misreading of handwriting).	"	"	" " 59 00	>2h	5.0	.19 .15	332 -75R	-9.5 Jy 13 17	1+, 6+	Gridley, Welch, Albert, Emanuel	W. Covina, California	4.5L, 8L, 8L, 375×, 6L	S=E	"		3	B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform Source	App. Ref.	Wt.	Phenom Type
	m d y	h m		λ , φ ° °		m d h	m d h	π_p π_a π ' " ' " ' " 1900A.D.		d	π, d	°	d m d h	K_p, ΣK_p			Ap. K Pa.					
884	7/ 8/65	0100?	Grimaldi	70W, 5S	White streak, extended toward limb.	Je 30 00 Jy 28 09	Jy 14 17	61 22 61 22 53 58 56 02		8.8:	.27: .28:	20: -50:R	-5.7: Jy 13 17	4+,21+ sc	Azevado, et al,	Sao Paulo?, Brazil			MBMW	262	3	B
885	7/18/65	0852-0901	Theophilus	26E, 11S	Red spots; ruby red within a pink area on c.p.	"	"	" " 54 40	9m	19.1	.59 .64	142 12S	+4.6 Jy 13 17	4-,31 sc	Cross, Ariola	Whittier, California	19L, 450×	S=4 T=3	AADC	259	5*	R
886	8/ 1/65	0500	Aristarchus	47W, 23N	Star-like flashes in ashen part. (7/31/65 in MBMW=loc. time=8/1/65 UT).	Jy 28 09 Au 25 19	Au 10 20	61 22 61 06 53 59 59 25		3.7	.10 .14	315 -92R	-11.0 Au 12 08	3-, 9-	Welch	Table Mt., California	6L	S=E	"	"	2	B
887	8/ 2/65	0357-0358	"	"	Star-like flashes in ashen light.	"	"	" " 58 30	1m	4.6	.22 .17	327 -80R	-10.1 Au 12 08	3+,19+	Bornhurst	Monterey Pk, California	10L, 240×	S=5	"	"	3	B
888	8/ 3/65	0418-0424	"	"	Star-like flashes in ashen light. (confirmed).	"	"	" " 57 33	6m	5.6	.26 .20	339 -68R	-9.1 Au 12 08	2+,14-	Bornhurst, Leasure, Emanuel	Monterey Pk, Whittier, California	10L, 240× 19L?	S=F-G	"	"	5	B
889	8/ 4/65	0402-0404	"	"	Star-like flashes in ashen light.	"	"	" " 56 40	2m	6.6	.30 .24	352 -55R	-8.1 Au 12 08	3-,13+	Bornhurst	Monterey Pk, California	10L, 240×	S=F-G	"	"	3	B
890	8/21/65	0655-0805	"	"	Color patch detected by Trident MB device. Color was pink. Astronauts on Gemini 5 saw a terrestrial aurora from space on this date.	"	"	" " 58 44	1.5h	23.9	.79 .84	201 27S	+9.0 Au 12 08	4_o,18 A	Gilheany, Johnson, Segerstrom	Port Tobacco, Maryland	16L, MB	S=E	MBDC	259	5*	R
891	9/ 4/65	0500?	SE of Ross D	24E, 11N	Ridge obscured. (date given is 9/3/65; if loc. time is 1800 or later would be 9/4/65 UT).	Au 25 19 S 22 23	S 07 04	61 06 60 24 54 04 54 52		8.4:	.39: .33:	10: 34:R	-6.8: S 11 00	3+,24+	Harris	Whittier?, California?	19L?		MBMW	pc to M	2	G
892	9/ 9/65	1320	Aristarchus	47W, 23N	Orange-red strip on floor. (confirm. later by Bartlett?).	"	"	" " 54 23		13.7	.56 .52	69 22R	-1.5 S 11 00	1_o, 5-	Presson				"		2*	R
893	9/10/65	0408-0438	"	"	S. region of floor granulated, 7° bright, very faint brownish tinge; rest of crater 8° bright white. (confirm. of Presson?).	"	"	" " 54 34	1/2h	14.4	.58 .55	83 36R	-0.8 S 11 00	1_o, 5_o	Bartlett	Baltimore, Maryland	5L, 130, 180×	S=4 T=3		pc	4*	R,D
894	9/11/65	0805-0815	"	"	Red glows. Photos obtained but do not show phenom. Haze terminated obs.	"	"	" " 54 55	10m	15.5	.62 .59	94 47R	+0.2 S 11 00	2-, 7+	Cross, Rasor	Palos Verdes, California	22L, 132×	S=F-P	MBDC	259	5*	R,B
895	9/12/65	0500, 0655, 1000	Plato	9W, 51N	Line depth ratios in spectra a/b (H), c/d (K) were abnormally high compared with 23 other areas, but not quite as pronounced as other areas on other dates.	"	"	" " 55 17 55 20 55 23	hrs.	16.4	.70 .58	108 80S	+1.2 S 11 00	4_o,17+	McCord	Mt. Wilson, California	60L, spectrom.			264	5*	B,V
896	9/13/65	0540, 0720	"	"	Line depth ratios of a/b (H), c/d (K) lines were abnormally high compared with 23 other areas.	"	"	" " 55 44 55 46	hrs.	17.4	.74 .62	120 68S	+2.2 S 11 00	4-,10+ sc-2	"	"	"			"	5*	B,V
897	10/ 1/65	0400:				S 22 23 O 20 11	O 04 20	60 24 59 33 54 11 55 18		6.1	.31:	344	-9.4 O 10 14	1+, 3-							1	
898	10/ 2/65	0400:				"	"	" " 54 47:		7.1:	.35:	356	-8.4 O 10 14	4_o,24+							1	
899	10/ 8/65	0548-0823	Alphonsus black spot, Upland # 1	4W, 14S, 74E, 15N	Line depth ratios a/b(H?), c/d (K?) were significantly low for upland #1 & abnormally high for Alphonsus black spot, but not as pronounced as the other area was high compared with 23 other areas.	"	"	" " 54 59 55 01	hrs	13.1	.61 .55	66 62R, 140R	-2.4 O 10 14	5-,22_o	"	"	"			"	5*	D,B,V
900	10/10/65	0600-0607	Aristarchus	47W, 23N	Pale viol. radiance whole of W. interior; dark viol. on nimbus; pale viol. on m.	"	"	" " 55 56	7m	15.2	.67 .63	90 43R	-0.4 O 10 14	1+, 5+	Bartlett	Baltimore, Maryland	3R, 300×	S=4 T=5		210	4*	V,G
901	10/11/65	0135-0200	"	"	Whole crater except S. floor region was pale viol. & viol. nearly all around wall except W. Yellow tinge on S. floor; dark viol. on nimbus; pale viol. on m & VA.	"	"	" " 56 21	1/2h	16.0	.69 .66	100 127S	+0.5 O 10 14	1_o, 6_o	"	"	4R, 150×, 4L, 280×	S=3 T=5		"	4	V,R
902	10/11/65	0515, 0732, 1010	Mare Crisium	60E, 14N	Line depth ratios a/b (H),, c/d (K) abnormally high compared with 23 other areas. (including Aristarchus?).	"	"	" " 56 26 56 29 56 33	hrs.	16.1	.71 .66	102 19S	+0.6 O 10 14	1_o, 6_o	McCord	Mt. Wilson, California	60L, spectrom.			264	5*	B,V
903	10/12/65	0100-0200	Plato	9W, 51N	Whole crater had a bluish tinge. (photos obtained but out-of-focus--chrom. aberr. ?).	"	"	" " 56 42	1h	17.0	.72 .69	109 80S	+1.5 O 10 14	2+,13-	Hibbard	Orlando, Florida	2.5R, 300×	S=E		pc	1	V
904	10/12/65	0215-0225	Aristarchus	47W, 23N	Nimbus only was a dark viol. hue.	"	"	" " 56 53	10m	"	"	113 114S	"	"	Bartlett	Baltimore, Maryland	5L, 280×			210	4	V
905	10/13/65	0250-0315	"	"	Pale blue-viol on EWBS & whole length of E. wall; pale viol. radiance in crater except S. floor. Dark viol. on nimbus.	"	"	" " 57 21	1/2h	18.1	.75 .73	127 100S	+2.5 O 10 14	3_o,15-	"	"	4L, 280×			"	4*	V,G
906	10/16/65	0805-1000	Cassini	4E, 40N	Color flashing pulsations intermittently detected by Trident MB device in Huntsville but not seen in Md. or vis. by Hardie when alerted. Pulsations in Cassini different from atmosphere.	"	"	" " 58 44	2h	21.2	.82 .85	164 11S	+5.8 O 10 14	1-, 3_o	McLarin, Bates, Hall, Hardie	Huntsville, Al Pt. Tobacco, MD Nashville, TE	20L, MB 16L, MB 30L	S=G	MBDC	259	2*	R?,G
907	10/18/65	0730-0736	Aristarchus	47W, 23N	Color with intermittent displays, detected with Trident MB device. Observers dubious.	"	"	" " 59 16	6m	23.2	.85 .92	187 39S	+7.7 O 10 14	3_o,11-	George, Dervas	Huntsville, Alabama	20L, 125×, MB	S=G	"	"	2	R,G
908	10/30/65	0200	"	"	Brightening in ashen light. Photos taken show it. Phenom. seen each lunation since July.	O 20 11 N 14 08	N 01 15	59 32 59 20 54 14 54 48		5.5	.40 .39	332 -75R	-10.1 N 09 04	3_o,16_o	Eastman	Palos Verdes California	12L		AADC	259	5*	B
909	10/30/65	2330-2350	E. of Atlas	51E, 48N	Fuzzy area--variations in shape & distinctness. Drawing. No other area did this.	"	"	" " 54 30:	1/3h	6.4	.41 .42	343 34R	-9.2 N 09 04	"	Fehring, Garris	Parasmus, New Jersey	2.4R, 88×	S=VG	MBDC	"	3*	G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	Φ/π	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ, β		m d h	m d h	π_p π_a π 1900 A. D.		d	d	°	m d h	K_p, ΣK_p			Ap. KPw					
910	11/3/65	2300- 2317	between M. Tranq. & M. Seren. (incl. Plinius ?)	25:E, 16N	A sickle-shaped series of "pot holes" near light & dark granulated area. Color tones were fuzzy white to gray, 5-7th mag. Some degree of fading. Drawing.	O 20 11 N 14 08	N 01 15	59 32 59 20 54 14 55 00:	17m	10.4	.59	31 56:R	-5.2 N 09 04	1_o, 2_o	Fehring, Garris	Paramus, New Jersey	2.4R, 88×			pc	3	δ?
911	11/6/65	0320- 0350, 0550	Aristarchus	47W, 23N	Strong blue-viol. glare on E. & NE wall; dark viol. hue in nimbus. (absent at 0320-0350. Listed as 11/6/55 in both ref. 210 & MBMW, but should be 1965).	"	"	" " 55 53		12.6	.68 .67	58 11R	-3.0 N 09 04	4+, 24_o sc+2	Bartlett	Baltimore, Maryland	3R, 300×	S=6 T=5		210	4	V
912	11/9/65	0450	Upland # 2	40.5W, 45.7?	Line depth anomaly, low compared with 23 other areas.	"	"	" " 57 47		15.6	.72 .79	94 54R	-0.2 N 09 04	4+, 24_o	McCord	Mt. Wilson, California	60L, spectrom.			264	5*	D
913	11/10/65	0125- 0157, 0500- 0530	Aristarchus	47W, 23N	Viol. tinge & radiance around nimbus; used red filter. Aris. A became larger At 0500-0530 saw viol. in crater also.	"	"	" " 58 15, 58 22	>4h	16.5	.84 .83	104 122S	+0.8 N 09 04	0+, 1-	Bartlett	Baltimore, Maryland	4L	S=6 T=5	ALPO-W	pc	4*	V,G
914	11/15/65	0555- 1000	"	"	Color on c.p. detected with Trident MB, not seen vis. at Port Tobacco. Network alerted & 6 responded. 4 did not see anything unusual; 2 others did & saw red on c.p. in 6-in refr., but not in 20-in refl. at 400×; other saw indistinctness. Port Tobacco obs. took 5 rolls of film in blue & red & neutral. Phenom. not detectable on them, but focus was poor. Blue images had most detail, whereas would expect red or neutral to. Phenom. still present at dawn in Moon Blink device.	N 14 08 D 11 06	N 29 12	59 20 60 11 54 11 59 17	>4h	21.5	.03 .04	169 59S	+6.1 N 09 04	2-, 5-	Hall, Johnson, Nordling, Genatt, Wagman	Pt. Tobacco, Maryland, Greenbelt, MD, Pittsburgh, PA	16L, 400× MB 6R, 50×, 20L, 400× 30R	S=VG	MBDC	259	5*	R,G
915	11/26/65	0137- 0206	"	"	Brightening in ashen light. Photos taken. Others saw vis. at same time. Harris et al. saw flashes on S. rim. (indep. confirm. ?).	"	"	" " 55 02	1/2h	2.9	.36 .44	300 -107R	-12.6 D 08 17	2-, 8-	Bornhurst, Harris, et al.	Monterey Pk. Whittier ?, California	10L 19L ?	S=VG T=E	AADC	259	5*	B
916	12/2/65	0300 ?			Reddish glow, followed by black obscuration. (date in MBMW is 12/1/65, but if loc. time = 2nd UT).	"	"	" " 54 47		8.9:	.63: .70:	11:	-6.6: D 08 17	3+, 17+	Evrard, et al.	Western US	?		MBMW	pc to M	3*	R,B,G
917	12/4/65	0425	Ross D	24E, 13N	Obscuration of part of the rim, also bright area 7-10km diam. Not seen on following nite.	"	"	" " 55 59		11.0	.74	39 63R	-4.5 D 08 17	3+, 19_o	Cross	Whittier ?, California	19L ?			pc to M	3*	G,B
918	12/27/65	0100	Aristarchus	47W, 23N	Brightening in ashen light. (indep. confirmation ?).	D 11 06 Ja 08 10	D 27 07	60 11 61 03 54 04 54 04		4.1	.50 .56	317 90R	-11.2 Ja 07 05	3_o, 19-	Bornhurst, Harris	Monterey Pk, Whittier ?, California	10L 19L ?		AADC	259	4	B
919	12/30/65	1935	Dome W. of Manilius	8E, 16N	White patch of haze, everything else was sharp.	"	"	" " 54 58		7.9	.63 .69	2 10R	-7.4 Ja 07 05	3-, 12-	Newport	England	4R, 180×			265	3*	G,B
920	1/28/66	0124- 0345	Theophilus	26E, 11S	3 red patches appearing & disappearing at different times. Occurred at sunrise on it. Later, red patch appeared on the floor.	Ja 08 10 F 05 22	Ja 23 19	61 03 61 30 53 57 56 48	2h	6.4	.63 .66	346 12R	-8.6 F 05 16	4_o, 11- sc	Cross, Ariola	Whittier, California	19L, 300×	S=5-6 T=4		pc	5*	R,G
921	2/7/66	0100- 0120	Aristarchus	47W, 23N	Nimbus only; intense dark viol. hue.	F 05 22 Mr 06 11	F 19 21	61 30 61 22 53 55 61 17	1/3h	16.4	.05 .04	107 120S	+1.4 F 05 16	2-, 9+	Bartlett	Baltimore, Maryland	3R, 200×	S=3 T=5		210	4	V
922	3/1-/66 2	2300- 0045	Copernicus	20W, 9N	As sun rose higher, west (ast.?) outer wall was bathed in a soft viol. color--not in evidence on flat ground below the wall.	"	"	" " 58 49	1.75h	9.6	.91	27 7R	-5.1 Mr 07 02	2-, 5+, 1_o, 5_o	Lovell	Auburn, Ohio	4R, 120×	S=E T=3.5		pc	3	V
923	3/29/66	2100	Archimedes	5W, 29N	Brightening of E-W bands across floor. (Obscuration accord. to Moore).	Mr 06 11 Ap 03 19	Mr 19 03	61 22 60 44 53 58 58 25		7.5	.79 .82	5 0R	-6.7 Ap 05 11	5-, 17_o sc+2	Hill	England	24L, 250×	S=E		267	3	B,G
924	4/1/66	0300- 0320 (UT ?)	Alphonsus	4W, 14S	Red patch from c.p. to W. wall. (no confirm. from Corralitos obs. moon blink device & obs. at that time.).	"	"	" " 59 54	1/3h	10.0	.86 .91	34 30R	-4.4 Ap 05 11	5+, 20_o sc	Jennings, Harris	Coral Estates, California	12L		AADC	259	3	R
925	4/2/66	2330- 2350	Aristarchus	47W, 23N	Central peak was very bright & a clear silver glistening effect.	"	"	" " 60 40	1/3h	11.8	.90 .94	57 10R	-2.5 Ap 05 11	5-, 17- sc+1	Brown	England	12L, 250×	S=E		268	2	B,G
926	4/3/66	2300- 2330	"	"	C.p. very bright silvery glistening. He thinks it is normal under exceptionally good seeing.	Ap 03 19 My 01 14	Ap 15 18	60 44 59 52 54 06 60 40	1/2h	12.8	.93 .97	60 22R	-1.5 Ap 05 11	3-, 14- ms+2	Brown ?	England	" ?	S=E		"	2	B
927	4/12/66	0105- 0123	Gassendi	40W, 16S	Abrupt flash of red, settling immediately to a point of red haze near NW (IAU ?) wall. Continuous till 0123h. (Not confirmed at Corralitos Obs. MB--at same time ?).	"	"	" " 55 14	1/3h	20.9	.30	167 53S	+6.5 Ap 05 11	2_o, 6:	Whippey, Corralitos Observatory	Northolt, Eng. Organ Pass, New Mexico	6L, 212× 24L, MB			384	3*	R,G
928	4/17/66	0500 ?	Alphonsus	4W, 14S	Blink on SW floor of Alphonsus. (mo on rise at @ 0430. Rotating filter blink technique without image tube that Trident & Corralitos had).	"	"	" " 54 16		26.0:	.54: .48:	230: 46:S	+11.7: Ap 05 11	2-, 8+	E. L. Cross	England				268 ?	3*	R

No.	Date	Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ, β		m d h	m d h	π_p π_a π ′ ″ ′ ″ ′ ″ 1900 A. D.		d	π, d	°	d, m d h	K_p, ΣK_p			Ap K Pw					
929	4/26/66	0300 ?	Aristarchus	47W, 23N	Brightening near crater. Found to be a small bright crater which due to image excursion blended into suuroundings most of the time. Stable seeing allowed it to be resolved occasionally.	"	"	" " 58 01		5.2:	.80:	338: -69:R	-8.8: My 04 21	1_o, 6-	Corralitos Obs.	Organ Pass New Mexico	24L, MB			392	0	B
930	4/28/66	2158	Alphonsus	4W, 14S	Reddish patches. (not confirmed at Corralitos with MB tho they give feature as Gassendi in their report).	Ap 03 19 My 01 14	Ap 15 18	60 44 59 52 54 06 59 21		8.0	.91 .90	3 9R	-6.0 My 04 21	2-, 9_o	Smith, Corralitos Observatory	-----, Eng. Organ Pass, New Mexico	10L 24L, MB			268 392	2*	R
931	4/30/66	2130- 2330	Gassendi	40W, 16S	English moon blink system detected red spots with vis. confirm. Ringsdore saw no color but saw obscuration. (LRL 60-in photos showed nothing unusual by my casual inspection). Indep. confirm. (even E. wall was in dark). Corralitos did not confirm by MB.	"	"	" " 59 50	2h	10.0	.98 .98	36 -4R	-4.0 My 04 21	3_o, 19_o	Sartory, Ringsdore, Moore, Moseley Corralitos Obs.	England " Armagh, Ire. Organ Pass New Mexico	8.5L 10R 24L, MB	S=E S=VG	Mo	267, 392	5*	R, G
932	5/1/66	1930- 2320	Gassendi	40W, 16S	Eng. moon blink & obscuration, also vis. confirm. (Moore & Moseley alerted by Sartory. Corralitos MB did not confirm.).	My 01 14 My 27 14	My 13 13	59 52 59 18 54 13 59 52	4h	11.0	.02 .01	50 10R	-3.0 My 04 21	3+, 16-	Sartory, Moore, Moseley Corralitos Obs.	England Ireland Organ Pass New Mexico	8.5L, 500× 12.5L, 350× 24L, MB	S=G S=E		267 392	5*	G, R
933	5/1/66	2155- 2245	Aristarchus	47W, 23N	Eng. moon blink detected red spots, seen vis. by all but Ringsdore. Brown saw intense white spot NW of crater wall.	"	"	" " "	1h	"	"	50 3R	"	"	Paterson, Brown, Sartory, Ringsdore	England " "	12L, 252× 8.5L ?			267	5*	R, B
934	5/2/66	2005	Cobra Head	48W, 24N	Eng. moon blink detected red spot, also seen visually.	"	"	" " 59 51	.	11.9	.03 .05	61 13R	-2.1 My 04 21	3+, 21_o	Sartory	England	8.5L, 400×			"	4*	R
935	5/2/66	2016- 2019	Gassendi	40W, 16S	Eng. moon blink detected red spots, seen visually also.	"	"	" " "	4m	"	"	61 21R	"	"	"	"	"			"	4*	R
936	5/3/66	2130	Alphonsus	4W, 13S	Reddish patches. Not confirmed by Corralitos MB (but in their report they give feature as Gassendi)	"	"	" " 59 23		13.0	.08 .09	74 70R	-1.0 My 0421	3-, 10-	Smith, Corralitos Obs.	England, Organ Pass New Mexico	10L, 24L, MB			269, 392	2*	R
937	5/27/66	2110	"	"	Red color on central peak area.	My 27 14 Je 22 08	Je 10 08	59 18 59 47 54 15 59 18		7.4	.01 .01	7 3R	-6.5 Je 03 08	4-, 8+ sc	Sartory, Moore, Moseley	England Ireland	8.5L 10R		Mo		5*	R
938	5/28/66	2240	"	"	Red patches. (Smith), Trident Moon Blink device suspected(in log)(time 2300-0100 ?, indep. confirm. ?) Corralitos did not confirm with MB, (however they report Gassendi--misident. ?).	"	"	" " 59 14	hrs ?	8.5	.04 .05	19 15R	-5.4 Je 03 08	3-, 10+ ms	Smith, Birney ?, Corralitos Obs.	England Virginia New Mexico	10L, 8R, MB 24L, MB			269, pc, 392	5*	R
939	5/29/66	2145- 2215	"	"	Glint lasting 1.5s. (onset of Smith's anomaly ?Specular reflection should last longer). Not confirmed by Corralitos MB. (however they report Gassendi, misident. or did they obs. another feature ?).	"	"	" " 59 04	1.5s	9.5	.07 .09	31 27R	-4.4 Je 03 08	2-, 7- sc+2	Wise, Corralitos Obs.	England, New Mexico	4.5L, 125× 24L, MB			268 392	4*	B
940	5/29/66	2245	"	"	Reddish patches. Negative results from Brown at 2121, 2225 UT.	"	"	" " "		"	"	"	"	"	Smith, Brown	England, England	10L				4*	R
941	5/30/66	2052- 2059	Gassendi	40W, 16S	Orange patch & obscuration--detected by Eng. moon blink system. Color seen visually.	"	"	" " 58 51	7m	10.4	.09 .12	42 2R	-3.5 Je 03 08	2-, 9 sc-1	Sartory	"	8.5L, filters			"	4*	R, G
942	6/1/66	0310- 0340	Aristarchus	47W, 23N	Entire sunlit area of floor was bluish	"	"	" " 58 22	1/2h	11.8	.15 .18	59 12R	-2.1 Je 03 08	5+, 14_o sc+1	Bartlett	Baltimore, Maryland	4R, 4L, 145×	S=3 T=5		210	4	V
943	6/1/66	0310- 0340	Herodotus	48W, 22N	Observation not certain because of poor seeing, but strong impression of a 6° bright spot on dark floor of 2° bright. No color.	"	"	" " "	"	"	"	59 11R	"	"	"	"	4L, 145×	"		pc	4	B
944	6/2/66	0305- 0335	Lichtenberg	67W, 32N	Red glow on W. wall(Schneller thinks this is "normal" reddening at SR; however, these vary according to Ricker). (This rep't is the only positive one from alert sent out to observe for J. Green's tidal predictions. See list of neg. obs.).	"	"	" " 57 54	1/2h	12.7	.17 .21	71 4R	-1.2 Je 03 08	3+, 17+ sc+2	Schneller	Cleveland, Ohio	8L, slit spectro- scope		ALPO-R	270	3*	R
945	6/2/66	0400- 0430	Aristarchus	47W, 23N	Brownish-yellow edge on S. rim . 2 others obs. this nite saw nothing unusual.	"	"	" " 57 53	1/2h	12.8	.18 .22	71 24R	-1.1 Je 03 08	"	Jaeger	Hammond, Indiana	6L		ALPO-R	270	2	R
946	6/3/66	0100- 0145	"	"	Deep blue color on N. wall. S. part of crater was brownish. (not on alert). Delano saw E. wall bright spot unusually bright. (confirm. ?).	"	"	" " 57 21	3/4h	13.6	.21 .25	82 35R	-0.2 Je 03 08	3+, 13-	Gordon (2), Delano	Ackerman, PA Massachusetts	3.5L Questar 160× 3L, 92×, 10L	S=3-6 T=4	ALPO-R	pc	5*	V, B, R
947	6/3/66	0600- 0620	"	"	Nimbus only was of a viol. color. (indep. confirm. of activity ?).	"	"	" " 57 17	1/3h	13.9	.23 .26	84 37R	-0.1 Je 03 08	"	Bartlett	Baltimore, Maryland	5L	S=5 T=5		210	5*	V
948	6/26/66	0430- 0440	Alphonsus	4W, 13S	Absorp. spectrum(visual) of c.p.; band at 4750±50 (1st est.); 2nd est. at 4850±50A. Band degraded toward viol. Band nr. Hβ as if were abnormally broadened. Appeared only on c.p., not over walls. Calibration corrections put bandhead at 4910A±40A.	Je 22 08 Jy 20 01	Jy 08 01	59 47 60 36 54 09 58 51	10m	7.5	.14 .14	5 1R	-6.6 Jy 02 20	7_o, 41+ ms, sc+2	Harris, Ariola	Whittier, California	19L, 145× spectrum	S=4 T=1	AADC	271	5*	V, G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom Type
	m d y	h m		λ ° φ °		m d h	m d h	π_p ' " π_a ' " π ' "		d	m d	°	d, m d h	K_p, Σ K_p			Ap K Pw					
								1900A.D.														
949	6/27/66	2140-2155	Plato	9W, 51N	Color (red?) on SE wall detected by Eng. moon blink sys. (confirm.).	Je 22 08 Jy 20 01	Jy 08 01	59 47 60 36 54 09 58 09	1/4h	9.1	.18 .20	25 16R	-4.9 Jy 02 20	1+, 7-	Hedley-Robinson, Sartory	Teignmouth, England	10.5L 8.5L, MB			272	5*	R?
950	6/30/66	0310-0335	Herodotus	48W, 22N	Bright pseudo-peak again vis. within floor shadow. Peak est. 5° bright. Had seen it at successive lunations in '66	"	"	" " 57 04	1/2h	11.3	.25 .28	53 5R	-2.7 Jy 02 20	2+, 12_0	Bartlett	Baltimore, Maryland	4L, 280×	S=5 T=4		273, pc	4*	B
951	7/1/66	0220-0235	Agrippa	11E, 4N	Central peak remarkably dull & barely vis., est. 4° bright vs. 3° floor & grayish.	"	"	" " 56 34	1/4h	12.3	.29 .32	65 76R	-1.7 Jy 02 20	2_0, 12	"	"	"	S=3 T=3		pc	4*	D
952	7/2/66	0345-0430	"	"	C.p. presented unusual appearance, flanks dull & grayish, est. at 4°, floor at 3° with white, 5° summit.	"	"	" " 56 02	3/4h	13.4	.31 .36	78 89R	-0.6 Jy 02 20	2+, 8+	"	"	3R, 200×	S=3 T=2		pc	4*	D
953	7/3/66	0523-0547	"	"	C.p. remains dull, 4°, & grayish, but white spot at summit is gone.	"	"	" " 55 32	24m	14.4	.35 .39	91 102R	+0.4 Jy 02 20	2_0, 9+	"	"	5L, 194×	S=5 T=3		pc	4	D
954	7/4/66	0525-0545	"	"	C.p. remains abnormally dull, est. at 4°.	"	"	" " 55 05	1/3h	15.4	.38 .43	103 66S	+1.4 Jy 02 20	4+, 19_0	"	"	"	S=5 T=4		pc	4	D
955	7/4/66	0615-0635	Aristarchus	47W, 23N	S. region of floor was granulated & dull; est. at 6° & pale yellow-brown tint. Rest of crater est. 8° bright white. Not confirmed by Corralitos MB.	"	"	" " 55 03	1/3h	15.5	"	103 124S	+1.5 Jy 02 20	"	", Corralitos Obs.	" Organ Pass New Mexico	5L, 142, 194, 282× 24L, MB	S=5 T=4		pc, 392	4	R
956	7/19/66	0200-0215:	Triesnecker	4E, 4N	Faint illum. of a ridge in shadow; faded quickly. (In BAA--judged dubious). Not confirmed by Corralitos MB.	"	"	" " 54 28	1/4h	21.2	.59 .66	173 +3S	+7.3 Jy 02 20	5_0, 28+ sc+1	Allen, Corralitos Obs.	Cambridge, Eng. ? Organ Pass New Mexico	12R, 280× 24L			274, 1 392		B
957	7/25/66	0440	Hyginus Cleft	6:E, 7N	Points at opposite ends of cleft were very brilliant in red Wratten 25 filter & very dull in blue Wratten 47 filter. (Ricker uncertain if real LTP).	Jy 20 01 Au 17 07	Au 04 16	60 36 61 13 54 02 58 16		7.0	.18 .18	358 4R	-7.2 Au 01 09	1_0, 7+ sc-2	Kelsey	Riverside, California	8L, 300×		ALPO-R	pc 1		B,R
958	7/29/66	0340	Aristarchus	47W, 23N	Spot on S. wall vis. only in red filter, brightness 9°. Slightly brighter than surrounding wall. No confirm. Says it might be part that reflected better. Not confirmed by Corralitos Obs. MB.	"	"	" " 55 55		10.9	.33 .32	47 0 R	-3.3 Au 01 09	3_0, 10_0 sc+2	Simmons, Corralitos Obs.	Jacksonville, Fl., Organ Pass, N.M.	6L, 192×, 24L, MB	S=7 T=4-5	ALPO-R	pc 1		R, B
959	7/30/66	0535-0729	", Cobra Head	" 48W, 24N	S. part of Cobra Head nr. Herodotus was a red spot; also nr. Aris. & the fork of Schroter's Valley. Variations in phenom. color, 1st on S. rim of Aris., later on N. rim. Drawings.	"	"	" " 55 22	2h	12.0	.36 .36	60 13 R, 12R	-2.1 Au 01 09	3-, 11-	Arriola, Cross	Whittier, California	19L, 390×	S=3-5 T=3		pc 5*		R, G
960	8/1/66	0050-0120	Aristarchus	47W, 23N	Eng. moon blink detected color (red?) on SW wall. Telephone link got other vis. confirm., & also another moon blink.	"	"	" " 54 42	1/2h	13.8	.40 .42	82 35R	-0.3 Au 01 09	3_0, 12-	Moore, Moseley Ireland Corvan		10R, MB			275	5*	R
961	8/1/66	0615	Plato	9W, 51N	E(IAU?) wall wouldn't focus tho rest of formation was well-focused. (Ricker uncertain if real LTP. I(WSC) think it probably was--similar to Barlett's experience on Aris.).	"	"	" " 54 37		14.1	.40 .44	85 76R	-0.2 Au 01 09	"	Kelsey	Riverside, California	8L, 300×		ALPO-R	pc 2*		G
962	8/2/66	0620	"	"	Again E. (IAU?) wall would not focus.	"	"	" " 54 20		15.1	.42 .47	98 91S	+0.8 Au 01 09	1-, 1+	"	"	"		"	" 2*		G
963	8/5/66	0522-0538	Aristarchus	47W, 23N	S. part of floor was granulated & est. at 6° bright; faint yellow-brownish tint. Rest of crater 8° bright white.	"	"	" " 54 03	1/4h	18.0	.52 .57	133 94S	+3.8 Au 01 09	4-, 18+	Bartlett	Baltimore, Maryland	4L, 93, 125, 281×	S=4 T=5		pc 4		R, D
964	8/5-/66 6	2337-0258	Plato	9W, 51N	Several red glows at different places at different times. Each lasted a few min. (not confirmed by Ringsdore. Given as 8/4-6/66 in MBMW).	"	"	" " 54 08	4.5h	18.8	.54 .60	143 46S	+4.7 Au 01 09	4-, 18-, 2+, 13+	Corvan, Moseley, Ringsdore	Armagh, Ire. " England	10R, 280×, MB, 8.5L, MB			274	4*	R
965	8/24/66	0415-0425	Jansen	28E, 14N	Bright green glow--using red & blue filters & green polariz. filter.	Au 17 07 S 14 17	Au 31 23	61 13 61 24 53 57 56 47	10m	7.6	.24 .24	5 33R	-6.9 Au 31 00	4+, 29-	deBerard	Flossmoor, Illinois	6L, 360×	S=VG	MB DC	pc 3		V
966	8/26/66	0152-0224	Agrippa	11E, 4N	Shadow of c.p. was grayish, wall shad. was normal black. C.p. itself barely disting. from floor.	"	"	" " 55 32	1/2h	9.6	.34 .31	29 40R	-4.9 Au 31 00	3-, 11+	Bartlett	Baltimore, Maryland	5L, 437×	S=5 T=3		"	4*	G
967	8/27/66	0605-0635	Ross D area	22:E, 12:N	Obscuration of E. wall, bright area E. of crater at its brightest. (I(WSC) was present at obs. but did not note anything not attributable to bad seeing, but am not familiar with the area in normal aspect. Others present did not see anything unusual, but Bornhurst & Eastman confirmed). Corralitos Obs. found due to changing light conditions.	"	"	" " 54 56	1/2h	10.8	.38 .35	43 65R	-3.8 Au 31 00	2, 11 sc-2	Harris, Eastman, Bornhurst, Cameron, astronet obs. Corralitos Obs.	Tucson, AZ " " " Organ Pass New Mexico	21L, 200× 24L, MB	S=P	MBDC		1	G, B
968	8/27/66	0605-0635:	Alphonsus	4W, 13S	W. dark-haloed area varying & the small dark-haloed (40%) area also varying. Seen by others present incl. the author(WSC) who attributes the variations to "seeing". Not confirmed by Corralitos MB.	"	"	" " "	"	"	"	43 39R	"	"	"	"	"	"	"		1	G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt	Phenom. Type
	m d y	h m		λ ° β °		m d h	m d h	π_p π_e $\bar{\pi}$		d	$\bar{\pi}$, d	°	d, m d h	K_p, ΣK_p			Ap K Pa					
								1900 A.D.														
969	8/28/66	0600-0800	Alphonsus	4W, 13S	Brightenings in 2 dark patches & near fainter (40%) dark patch (40% of way from the c.p. to W. wall).	Au 17 07 S 14 17	Au 31 23	61 13 61 24 53 57 54 34	2h	11.8	.41 .39	55 51R	-2.7 Au 31 00	2, 9- sc-1	Astronet obs.	Tucson, AZ California	21L, 200×	S=P	MBDC	pc	2	G, B
970	8/30/66	0510-0525	Aristarchus	47W, 23N	Distinct brownish tone in S. area of floor. Not confirmed by Corralitos MB	"	"	" " 54 06	1/4 h	13.7	.46 .45	79 32R	-0.8 Au 31 00	7+, 45+ sc	Bartlett Corralitos Ob.	Baltimore, Maryland, New Mexico	5L, 79, 142, 194, 283×; 24L	S=3-5 T=3	MB	pc, 392	4	R
971	9/2/66	0316-0418	Alphonsus	4W, 13S	A series of weak glows, final flash at 0418h. Not confirmed by Corralitos MB	"	"	" " 54 01	1 h	16.7	.52 .56	114 70S	+2.2 Au 31 00	4+, 23- sc	Whippey, Corralitos Obs.	Northolt, Eng. Organ Pass New Mexico	3R 24L, MB		MBMW	276, 392	3*	B, G
972	9/2/66	0450-0520	Gassendi	40W, 16S	Eng. moon blink sys. detected red glows on c.p. & around it; seen vis. too. (Corralitos obs. at that time? did not see anything?)	"	"	" " "	1/2 h	"	"	115 105S	"	"	Moseley, Cave	Armagh, Ire. England?	10R, MB MB	S=F		274	5*	R
973	9/2/66	0625	Plato	9W, 51N	Landslip at west would not focus. (Ricker not certain it was a real LTP).	"	"	" " 54 02		16.8	"	116 73S	+2.3 Au 31 00	"	Kelsey	Riverside, California	8L, 300×		ALPO-R		2	G
974	9/3/66	0111-0146	Gassendi	40W, 16S	Eng. moon blink sys. detected red glows on c.p. & around it. Independently seen by Cave. Not confirmed by Corralitos MB.	"	"	" " 54 10	1/2 h	17.5	.55 .59	127 93S	+3.0 Au 31 00	9-, 44- ms	Moore, Moseley, Corralitos Obs. Cave, Gill	Armagh, Ire. " Organ Pass New Mexico, England?	12.5L, 10R, 400× 24L, MB 6L, 365×			274, 392	5*	R
975	9/5/66	0447-0500	Agrippa	11E, 4N	Wiyhin the wall shadow, the landslip was faintly illum., est. at 4°, & distinctly brownish.	"	"	" " 54 54	1/4 h	19.7	.65 .66	152 17S	+5.2 Au 31 00	4+, 20- ms	Bartlett	Baltimore, Maryland	5L, 283×	S=6-1 T=3-1		pc	4*	R, B, G
976	9/9/66	2100-2130	Wargentin, Nasmyth	60W, 50S 55W, 50S	Floor of War. was a very dark gray, 2 shades darker (on a scale of 1-10) than the floor of Nas. & nothing to be seen on it even along the ridge. Drawing.	"	"	" " 58 25	1/2 h	24.3	.83 .83	207 33S	+9.9 Au 31 00	4+, 27	Cave	England	6L, 364×	S=F		277	3*	D
977	9/20/66	0322	Grimaldi	67W, 5S	3 observers (indep. ?) reported flashes in the crater. 1 obs. was in Phoenix, another in LA., so probably not due to atm. (the astronaut Schmitt, on Apollo 17 saw a flash in it while orbiting the moon).	S 14 17 O 13 03	S 28 01	61 24 61 06 53 59 57 47		5.3	.20 .19	334 93R	-9.8 S 29 17	4+, 29- sc+1	Astronet obs.	Phoenix, AZ, Los Angeles, California			AADC	pc	5*	B
978	9/23/66	1933-2000	Haas (Pico E) ?	12W, 43N	Strong blink (Eng. sys.) on moon blink. (red ?)	"	"	" " 54 59	1/2 h	9.0	.34 .32	18 6R	-5.8 S 29 17	4+, 24 sc	Sartory	England	8.5L			277	4*	R?
979	9/24/66	0208-0227	Agrippa	11E, 4N	Shadow of c.p. abnormally light & grayish. Wall shadow normal black.	"	"	" " 54 51	1/3 h	9.3	.36 .33	23 34R	-5.6 S 29 17	3, 20+ sc+1	Bartlett	Baltimore, Maryland	5L, 283×	S=5-3 T=5-0		pc	4*	G, B
980	9/25/66	0215-0230	"	"	Shadow of c.p. remains light & grayish; wall shadow normal black. C.p. itself was very dull, est. at 4° albedo. (it's surprising that there is any shadow as steepness must be > 46°!).	"	"	" " 54 24	1/4 h	10.3	.39 .37	35 46R	-4.6 S 29 17	4, 18 sc+2	"	"	"	S=5-3 T=5-3		pc	4*	G, B, D
981	9/25/66	2020-2050	Gassendi	40W, 16S	Reddish patches--regarded dubious, owing to low altitude of moon.	"	"	" " 54 14	1/2 h	11.0	.43 .39	43 3R	-3.8 S 29 17	"	Moore, Moseley	Armagh, Ireland	10R, 140×			277	1	R
982	9/25/66	2312-2335	Plato	9W, 51N	Eng. moon blink sys. blinks inside the crater. Very dubious due to low alt. of moon.	"	"	" " 54 12	1/3 h	11.2	.43 .43	46 37R	-3.7 S 29 17	"	Moseley	Armagh, Ireland	"		MB	277	1	R
983	10/22/66	0015-0040	Agrippa	11E, 4N	Shadow of peak abnormally light & grayish. It is normally black & sharp at col. 3°.86 as on 8/24/64, & at col. 3°.31 on 6/26/66	O 13 03 N 10 09	O 25 10	61 06 60 20 54 04 54 55	25m	7.8	.36 .31	3 14R	-7.4 O 29 10	2-, 3-	Bartlett	Baltimore, Maryland	5L, 437×	S=5-3 T=5		pc	4*	G, B
984	10/23/66	0128-0155	"	"	Shadow of c.p. continued to be abnormally light & grayish.	"	"	" " 54 28	1/2 h	8.9	.43 .35	16 27R	-6.3 O 29 10	2-, 5	"	"	"	S=6-5 T=5		pc	4*	G, B
985	10/24/66	0148-0212	"	"	Shadow of c.p. light & grayish, scarcely distinguishable from floor. (sun is quite high (39°) so shadow ought to be nearly gone).	"	"	" " 54 11	24 m	9.9	.46 .39	28 39R	-5.3 O 29 10	4-, 19-	"	"	", 283×	S=5 T=3-2		"	4	G, B
986	10/25/66	0346	SE of Ross D	24E, 13N	Large bright area obscuring 1/2 of crater wall. Not present Oct. 24.	"	"	" " 54 04		10.9	.49 .43	41 65R	-4.3 O 29 10	4, 29- sc	Cross	Whittier?, California	19L		M	pc to M	3	B
987	10/25/66	2230-2310	Gassendi	40W, 17S	2 faint blinks (Eng.) on NW (IAU?) wall. (indep. confirm. ?).	"	"	" " 54 05	2/3 h	11.8	.52 .46	52 12R	-3.4 O 29 10	"	Moore, Moseley, Sartory	Armagh, Ire. " England	10R " 8.5L?			278	5*	R
988	10/26-/66 27	2345-0030	Aristarchus	47W, 23N	NE(IAU?) wall at rim had a definite light viol. hue. Effect not noticed on the 2 succeeding nites. Ricker considers this a true LTP.	"	"	" " 54 13	3/4 h	12.8	.54 .49	64 17R	-2.4 O 29 10	4-, 23- sc+1.5	Gordon	Ackermanville, Pennsylvania	3.5L, 80, 160×		ALPO-R	pc	5*	V
989	10/27/66	0230-0300	", Cobra Head	", 48W, 24N	C.p. of Aris. noticeably less bright thru blue filter but very bright thru red & no filter. Shadow of c.p. faint & grayish whereas wall shad. were normal black. (confirm. of Gordon, even tho 2h later?). Sketch. C.p. rated 10° in red & no filter, & 8° in blue. Other features rated same in all 3. Cobra Head had 2 red patches. Sketches. Not confirm. by Corralitos MB.	"	"	" " 54 14	1/2 h	12.9	.55 .50	65 18R	-2.3 O 29 10	3-, 13- sc+1.8	Delano, Corralitos Obs.	New Bedford, Massachusetts Organ Pass	12.5L, 300× 24L, MB		ALPO-R	pc, 392	5*	R, D, G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist.	Days fr FM & d,	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt	Phenom. Type
	m d y	h m		λ ° φ °		m d h	m d h	π_p ″ π_a ″ π ″ 1900A.D.		d	d	°	m d h	K_p, Σ K_p			Ap K Pw					
990	10/28/66	0044-0102	Agrippa	11E, 4N	Dark landslip & NW wall were invis. Wall here was 5° bright.	O 13 03 N 10 09	O 25 10	61 06 60 20 54 04 54 26	1/4 h	13.8	.57 .53	76 87R	-1.4 O 29 10	3 , 9	Bartlett	Baltimore, Maryland	4L,281×	S=5 T=5		pc	4*	G
991	10/29/66	0045-0130	Copernicus	20W, 9N	Red spot.	"	"	" " 54 45	3/4 h	14.8	.60 .56	88 68R	-0.4 O 29 10	2-, 7	Walker				MBMW	pc to M 7	2*	R
992	10/30/66	0132-0148	Aristarchus	47W, 23N	S. region of floor granulated & 6° bright light brownish tone; rest of crater 8° bright white.	"	"	" " 55 09	1/4 h	15.9	.62 .60	102 125S	+0.6 O 29 10	5-,19	Bartlett	Baltimore, Maryland	5L,79, 142,194×	S=5 T=3		pc	4	R,D
993	11/ 1/66	0205-0224	Agrippa	11E, 4N	Shadow of c.p. light & grayish; wall shad. normal black. Dark landslip invis. on Oct 28 was conspicuous tonite.	"	"	" " 56 02	1/3 h	17.9	.67 .67	126 43S	+2.7 O 29 10	3+,33	"	"	5L,283×	S=6 T=4		pc	4*	G,B
994	11/ 1/66	0247-0258	Aristarchus	47W, 23N	S. region of floor granulated, 6° bright distinctly yellow-brown; rest of crater 8° bright white.	"	"	" " "	11m	"	"	126 101S	"	"	"	"	5L,79, 142,194, 283×	"		"	4	R,D
995	11/19-/66 20	2358-0014	Agrippa	11E, 4N	Faint bluish tinge seen at base of NW wall beneath landslip.	N 10 09 D 07 18	N 22 03	60 20 59 27 54 11 54 34	1/4 h	7.4	.42 .35	356 7R	-8.1 N 2803	3+,21- sc+1	"	"	5L,283×	S=4 T=5		"	4*	V
996	11/21/66	0006-0023	"	"	Shadow of c.p. abnormally light, grayish & hard to see. Landslip in vis.	"	"	" " 54 17	1/4 h	8.4	.46 .39	8 19R	-7.1 N 28 03	3-,12+	"	"	3R,200×	S=3 T=5		"	4*	G,B
997	11/22/66	0103-0123	"	"	Shadow of c.p. remains very light, faint grayish. C.p. also dull grayish, 4° bright with a 5° bright spot at summit. (also on 7/22/66). Dark landslip on NW wall remained invis. Wall here dull grayish, 4° bright.	"	"	" " 54 11	1/3 h	9.4	.50 .42	21 32R	-6.1 N 28 03	1+, 5	"	"	3R,300×	S=5 T=5		"	4*	G,B,D
998	11/22/66	0317-0340	Alphonsus	4W, 13S	Seen first with (Eng.) moon blink, red glow at SE(IAU ?) base of c.p.; seen vis. & in red filter but not in green. Not seen at 0342h.	"	"	" " "	23m	9.5	"	22 18R	-6.0 N 28 03	1+, 5	Kelsey	Riverside, California	8L,300×		ALPO-B		4*	R
999	11/26/66	2326-2343	Agrippa	11E, 4N	On SW floor, 1 of the dark patches, K, had reappeared. This dark area had developed by col. 33.45 Nov. 23 in the current lun. & easily seen with the 3-in refr.; but by col. 45.49 Nov. 24 had been invis. in very good seeing. Tonite was strongly developed, @1-2° bright (blackish). Disappearance & reappearance within a few days made him suspect obscur.	"	"	" " 55 41	1/4 h	14.4	.66 .61	81 92R	-1.1 N 28 03	4-,18- sc+1	Bartlett	Baltimore, Maryland	5L,473×	S=5 T=5		pc	4*	G,D
1000	12/ 4/66	0105-0123	Gassendi	40W, 16S	Abrupt flash of red, settling in immediately to a pt. of red haze nr. NW (ast. ?) wall. Continuous till 0123. (date given was 4-12-66 = European convention ?)	"	"	" " 58 49	1/3 h	21.4	.82 .86	166 54S	-5.9 N 28 03	5-,26	Whippey	Northolt, ? England	6L,212×			279	3*	R,G
1001	12/ 4/66	0510	Kepler	38W, 7N	Saw a bright area thru blue filter but could not see it in red filter. Decided it was a bluish phenomenon.	"	"	" " 58 52		21.6	.83 .87	167 51S	+6.1 N 28 03	"	de Berard	Flossmoor, Illinois	6L,360×	S=G	MBDC	pc	3*	V
1002	12/18/66	2340-2346	White spot nr. Censorinus	33E, 2S	Attention drawn to pink color in the usually white patch. Brightened to a light reddish tinge for 2 min. then faded back to pink, then to white. Sketch.	D 07 18 Ja 01 10	D 20 00	59 27 " 59 23 54 14 54 19	6m	6.9	.43 .42	349 22R	-8.7 D 27 18	2+,11-	Enie	Pittsburgh, Pennsylvania	8L,100×	S=G	"	"	4*	R,G,B
1003	12/21/66	1710	Atlas	44E, 47N	Bright spot on SE part of floor, not seen in photo on 12/18/66.	"	"	" " 54 30		9.5	.55 .56	20 64R	-6.1 D 27 18	4-,20+	Andre	Belgium	3R			280	2	B
1004	12/22/66	0600-0630	Messier, Messier A	48E, 3S 47E, 3S	Blinks on floors of both craters. (blink device not stated).	"	"	" " 54 38	1/2 h	10.1	.59 .59	28 76R	-5.4 D 27 18	4-,23-	Kelsey	Riverside, California	8L,300×	S=G T=P		281	2*	R?
1005	12/23/66	0615-0710	Plato	9W, 51N	3 brilliant spots on floor, all showed blinks. (permanent colored Ground features ?). Not confirmed by Corralitos MB.	"	"	" " 55 04	1h	11.2	.63 .63	40 31R	-4.4 D 27 18	3,16-	", Corralitos Obs.	" Organ Pass. New Mexico	6L 24L,MB	S=P T=G		", 392	2	B,R
1006	12/27/66	0630-0705	Gassendi	40W, 16S	Very faint blink on SW (ast. ?) floor & on another N. of it on NW floor. Obs. considers obs. very suspect.	"	"	" " 57 36	1/2 h	15.2	.80 .79	89 44R	-0.4 D27 18	5 ,35	Kelsey,	Riverside, California	6L?			281	1	R
1007	12/31 ?/66	0300 ?	nr. Kepler	38:W, 7N	Special glow in this area. Confirmed by photoelectric method (Petrova) & polarimetric (Pospergelis ?) almost simultaneously recorded by both.	"	"	" " 59 17		19.0:	.96: .95:	155: 62:S	+3.4: D 27 18	1+, 6-	Petrova, Pospergelis	Pulkova Obs. Russia				282	5*	B
1008	1/14/67	1717-1735	Cape Agarum	66E, 15N	Cape was hazy or obscured whereas Picard, Peirce, & Cape Olivium were quite clear. Has seen this area obscured many times.	Ja 01 10 Ja 28 15	Ja 16 21	59 23 60 17 54 11 54 32	1/4 h	3.9	.42 .48	333 39R	-11.7 Ja 26 07	3 ,17-	Middleton	Colchester, England	4R,240×	S=G		290	3*	G
1009	1/18-/67 19	2300 ?-0100 ?	Archimedes	4W, 30N	Saw an obscuration or unusual appearance on floor. Not confirmed by Corralitos MB, (but their rep't says Aristarchus.)	"	"	" " 54 32		8.2:	.58: .65:	6: 2:R	-7.3: Ja 26 07	2 ,10+	Delano, Corralitos Obs.	New Bedford Massachusetts Organ Pass. New Mexico	?12.5 ?L 24L,MB	S=P	ALPO	? pc 392	4*	G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term. Dist.	Days fr. FM & hr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ . β		m d h	m d h	π_p π_a π		d	d	°	d, m d h	K_p, ΣK_p			Ap K Pw					
								1900A.D.														
1010	1/21/67	1750-2400	Gassendi, Sinus Iridum	40W, 16S 35W, 47N	Eng. moon blink at 1936. (no events from 1750-1815h) outside SE wall, brighter at 1939h, seen vis. at 1940h, faint at 1946h. Moved NW at 1950h. At 2000h, Moseley saw it farther W., lost it at 2008h. Seen again at 2026h further toward group of hills. Moore saw it faint at 2002h, lost it at 2005h, vis. & blink at 2007h. Checks again at 2010-50h, 2130-50, 2200-20, 2250-2300, 2325-0000h. Duckworth suspected blink at S. Iridum nr. Bianchini later, but clouds intervened, & after clearing couldn't see it. Neg. obs. in 11 other features, incl. Alphonsus & Plato. Confirmed Gass. blink 2018-2024h	Ja 01 10 Ja 28 15	Ja 16 21	59 23 60 17 54 11 56 15	50m (event)	11.0	.71 .75	40 0 R, 5 R	-4.5 Ja 26 07	3 ,17-	Moore, Moseley, Ringsdore, Sartory, Duckworth, Kilburn, Farrant	Armagh, Ire. " England, Farnham, Eng. England? Ashton, Eng. England	10R, 360× " 10L 15L? 6L 8L	S=G		280 p10	5*	R,G
1011	1/22/67	0010-0030	Gassendi	40W, 16S	Small (Eng.) moon blink close to oval blink of last year. Obs. for 20m. At 1st it was strong but diffused, then faded. Probably continuation of event of a few hrs. before. (Kilburn has 12 filters electrically? driven.).	"	"	" " 56 22	1/3 h	11.2	.72 .76	42 2R	-4.3 Ja 26 07	2+, 8+	Kilburn	Ashton, England	6L			"	3*	R
1012	1/27/67	0135-0205	Agrippa	11E, 4N	Dark landslip on NW wall invis.; wall here is 6° bright.	"	"	" " 60 01	1/2 h	16.3	.94 .94	104 65S	+0.8 Ja 26 07	2-, 7	Bartlett	Baltimore, Maryland	5L, 194×	S=4 T=3		pc	4*	B,G
1013	1/28/67	0004-0106	Gassendi	40W, 16S	Small moon blink (Eng.) not quite concentric with the crater, half way from c.p. to SE (IAU?) wall. Lasted till 0007h then clouds. Seen again at 0100h-0106, then lost with poor seeing. Looked again at 0148, 0230, 0310, but neg. Other areas also neg.	"	"	" " 60 15	1 h	17.2	.98 .98	115 105S	+1.7 Ja 26 07	4-, 19+	Moseley	Armagh, Ireland	10R, 350×	S=G		280 p10	4*	R
1014	2/17/67	1747-1812	Alphonsus	4W, 13S	Eng. moonblink suspected just inside SW floor on the elevation NW of famous dark patch. Feb 18 was cloudy, then on Feb 19, after some neg. results with blink, suddenly a bright glow in same place.	Ja 28 15 F 25 21	F 13 15	60 17 61 05 54 04 55 21	1/2 h	8.2	.64 .71	5 1R	-7.1 F 24 18	4 ,23+ sc+2	Moore, Moseley	Armagh, Ireland	10R, 300×			281 p 10	4*	R,B
1015	2/18/67	2030-2040	Gassendi	40W, 16S	Red color in crater. (in dark).	"	"	" " 56 05	10m	9.3	.69 .75	21 -19R	-5.9 F 24 18	2 ,10+	"	"	10R				4*	R
1016	2/19/67	2030-2111	Alphonsus	4W, 13S	Blink area between 1900 & 1940 with neg. results. Suddenly at 2030 there was a bright red glow, brightest Moseley had ever seen, at Feb 17 suspected place. Moore returned at 2037h in time to see fading effect. Brief return at 2105-2111; neg. from 2120-2250h then clouds. Nothing on Feb 20. confirmation).	"	"	" " 57 04	2/3 h	10.4	.73 .78	29 15R	-4.9 F 24 18	2+, 9+	"	"	10R, 360×			281	5*	R,B
1017	2/24/67	0400:	Plato	9W, 51N	Eng. moon blink on E(ast. ?) wall (red). (time deduced from colongitude given).	"	"	" " 60 39		14.8	.94:	86 77R	-0.5: F 24 18	2+, 9	Kelsey	Riverside, California	8L?			283	3*	R
1018	3/22/67	1939-1943	Gassendi	40W, 16S	Red color & blink strongly suspected in small area centered on junction of 3 clefts 1/2 way from c.p. & ESE wall. Well-defined & did not note change during obs. period. Clouds terminated obs. till 2120 when it was not seen.	F 25 21 Mr 26 08	Mr 13 01	61 05 61 27 53 58 59 37	4m	11.6	.84 .87	50 10R	-3.4 Mr 26 03	2+, 8	Moseley	Armagh, Ireland	10R, 360×			279 p 4	3*	R
1019	3/23/67	1840-1850	"	"	Heavy blink on inner S. wall. Moved toward N. at 1845, faded at 1850.	"	"	" " 60 23	10m	12.5	.91 .91	61 21R	-2.4 Mr 26 03	3-, 8+	Sartory	Farnham, England	15L			"	3*	R,G
1020	3/23/67	1840-2047	Cobra Head	48W, 24N	Red patch seen intermittently; moon-blink from 1916-2047h. Position agreed with Sartory who had alerted them to Aris. area; checks on others were neg.	"	"	" " 60 27	2h	12.6	"	61 13R	-2.3 Mr 26 03	"	Sartory, Moore, Moseley	" Armagh, Ire.	" 10R, 360×	S=VP S-F-P		279 p 3	5*	R
1021	3/23/67	1840-2030, 2130	Aristarchus	47W, 23N	Suspected color on SW (ast.) wall. Farrant saw color in crater, completely independently. (inform. suggests same phenom. as seen by Moore & Moseley tho they said Cobra Head).	"	"	" " 60 29	3 h	12.7	"	64 17R	-2.3 Mr 26 03	"	Marsh, Farrant	England, Cambridge, Eng.	8L, 330×, 8L			"	5*	R
1022	4/15/67	1915-2100	"	"	Very bright; seeing very good till 2100h. Nothing unusual on 16th & 17th. (1st LTP seen by this group).	Mr 26 08 Ap 23 19	Ap 09 03	61 27 61 16 53 56 55 56	2h	5.9	.67 .72	343 64R	-8.7 Ap 24 12	2-, 7+	Classen	Pulsnitz Obs. E. Germany	8R		LION	284	3*	B
1023	4/16/67	2030	Alphonsus	4W, 13S	Prominent glint on c.p., duration 1s. (forerunner of red patch in # 1024?).	"	"	" " 56 42	1 s	6.9	.71 .76	355 9R	-7.7 Ap 24 12	3+, 18+	Wise	England?	6.5L, 90×			285	3*	B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong Term. Dist.	Days fr FM & nr. FM	Solar Kp, Σ Kp	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ , β		m d h	m d h	π_p π_a π_r		d	π_p, d	°	d m d h	Kp, Σ Kp			Ap K Pw.					
								1900 A.D.														
1024	4/17/67	2130	Alphonsus, limb	4W, 13S 90W?	3 dark patches prominent. Suspected red patch (blink?). Also saw brilliant object nr. E(ast. ?) limb for 15m. Check on star maps neg. (indep. confirm. of Cross 1h later?).	Mr 26 08 Ap 23 19	Ap 09 03	61 27 61 16 53 56 57 36	15m	8.0	.75 .80	7 3R	-6.6 Ap 24 12	4,16+	Wise	England?	6.5L, 90×			285	3*	D,R,B
1025	4/17/67	2130	Plato	9W, 51N	Suspected a blink. (red?).	"	"	" " "		"	"	7 6R	"	"	"	"	"			"	2	R?
1026	4/17/67	2245	Alphonsus	4W, 13S	Suspected blink on SE(ast. ?) floor between peak & wall but never very marked & prob. due to turbulence. (confirm. of Wise in # 1024?).	"	"	" " "		8.1	"	7 3R	"	"	Cross	Preston, England	9L, 150×			285	2*	R?
1027	4/18/67	0310-0400	Plato	9W, 51N	Streak on floor showed slight enhancement in red filter comp. to blue. Later, a 2nd streak formed. Probably the sun shining thru a valley in the rim. Red enhancement permanent? (Wise suspected a blink here 6h earlier).	"	"	" " 57 46	1 h	8.3	.76 .81	11 2R	-6.3 Ap 24 12	3+,14	Kelsey	Riverside, California	8L, 300×	S=8 T=4-5		286	3	R
1028	4/18/67	1840-1845	Proclus	46E, 16N	Crater appeared quite dark, even the bright ring was subdued & seemed thicker than normal. Drawing.	"	"	" " 58 15	5m	8.8	.82	18 64R	-5.8 Ap 24 12	"	Farrant	Cambridge, England	8L, 175×			322	3*	D
1029	4/21/67	0230-0930	Whole moon		UV excess relative to red & visual images. Greatest (30%) at subsolar pt. nr. limb, grading down to 0% at term. Seen Apr. 22 also with a gradient of 10% at term. to 25-30% at subsolar pt. (137° long.). Filters well-balanced. Neg. (normal) on Apr. 20 & 23rd. Bandpass 3700-4900A on image enhancement & filter equip. (coincided with Lyrid meteor shower. They had seen this phenom. many times since).	"	"	" " 60 12	7 h	11.2	.88 .91	47	-3.4 Ap 24 12	2+,15+ sc-2	Dunlap, et al	Corralitos Obs. Organ Pass New Mexico	24 L, MB	clear	MBDC	pc	5*	V
1030	4/21/67	1900-2120	Aristarchus, Schroter's Valley, Herodotus	47W, 23N 48W, 24N 48W, 22N	On exterior wall of Aris., 3 pts. in Cobra Head & banks of valley were star-like & glowing; & Herod. were red. Farrant could not bring hill N. of Herod. into focus. He says color was deep red-orange & steady for 3 min. Started at 1915h (1916-1925h seeing was too bad) (indep. confirm.). Suspected next nite but bad seeing. Not confirmed by Corralitos MB.	"	"	" " 60 41	2h	11.9	.89 .93	54 7R	-2.7 Ap 24 12	"	Darnella, Farrant, Corralitos Obs	Copenhagen, Cambridge, Eng. Corralitos Organ Pass New Mexico	Den. 3.5R 8L, 160× 24L, MB	S=1-2		287 392	5*	R,G
1031	4/22/67	0230	Whole moon		UV excess as in # 1029. Gradient was 10% at term. to 25-30% at subsolar pt. (153° long.).	"	"	" " 60 50	h?	12.5	.92 .94	63	-2.1 Ap 24 12	5-,25+ sc-1	Dunlap, et al	Corralitos Obs. Organ Pass, New Mexico	24L, MB	clear	MBDC, Br	pc	5*	V
1032	4/22/67	2020	Aristarchus-Herodotus	47W, 23N-48W, 22N	Interference spectral filter. (indep. confirm. of Darnella?).	"	"	" " 61 07		12.9	.97 .97	68 20R	-1.7 Ap 24 12	"	Schobel	Hirschfelde, Germany	5L?			288	5*	R?
1033	4/22/67	2145	Aristarchus, Schroter's V, Herodotus	47W, 23N 48W, 24N 48W, 22N	Red pts. suspected in same areas as in # 1030, but seeing was bad. (confirm. by Schobel?). Corralitos MB did not confirm.	"	"	" " "		13.0	"	"	"	"	Darnella, Corralitos Obs.	Copenhagen, Den. Organ Pass New Mexico	3.5R 24L, MB			287, 392	5	R
1034	4/22/67	2100?	Aristarchus	47W, 23N	Crater was so bright it could be seen with the naked eye! (indep. confirm. of Darnella & Schobel of activity here?). Corralitos MB did not confirm.	"	"	" " 61 10		12.9	"	67: 20:R	-1.6: Ap 24 12	"	Classen Corralitos Obs	Pulsnitz Obs? E. Germany Organ Pass New Mexico	24L, MB		MBMW, M	pc to 392	3*	B
1035	4/24/67	1147-1208	nr. Grimaldi	75:W, 4:N	During totality, saw 2 luminescent spots (started 20m after beginning of totality). Location not certain because of dimness of umbral shad. & lunar features. (bright spots in Sven Hedin?). Color was bluish rather than yellowish. Mag. < 9th.	Ap 23 19 My 22 02	My 06 11	61 16 60 40 54 01 61 12	1/3 h	14.6	.03 .03	90 15R	0.0 Ap 24 12	5,32 sc+1	Osawa	Hyogo, Japan	6L, 50×		MBDC	pc	3	V,B
1036	5/20/67	2015	Aristarchus	47W, 23N	Red spots on S. rim. Moon was low.	"	"	" " 60 29		11.2	.95 .96	50 3R	-3.0 My 23 20	2+,11+	Darnella	Copenhagen, Denmark	3.5R?		MBMW		1	R
1037	5/20/67	2105-2120	Gassendi	40W, 16S	Eng. blink on SW part of floor.	"	"	" " "	1/4 h	"	"	50 10R	"	"	Kelsey	Riverside, California	8L, 300×?			289	3*	R
1038	5/29/67	0640-0725	Aristarchus-Herodotus	47W, 23N-48W, 22N	After timing sunset on Theophilus & Cyrillus turned to Aris.-Herod. At 0640 saw red-brown color centered at ξ = .685, η = +.390. Glow strongest at largest area at 0640. Decreased in area but not in intensity to 1/2 its size at 0648. At 0650 color gone. Seen again at 0658 but not so pronounced. Faded out at 0700. obs. terminated at 0725. (Haas thinks it might have been atm. dispersion at such low alt. of 12-17°).	My 22 02 Je 18 20	Je 03 02	60 40 59 50 54 08 56 01	3/4 h	19.6	.20 .26	153 74S	+6.5 My 23 20	7-,34+ ms?sc+1	Anderson	Manchester, N. Hampshire	10L, 212×	S=G T=E	ALPO-B	pc	1	R

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar $K_\odot$, ΣK_μ	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ , β		m d h	m d h	π_b π_a π		d	d	°	m d h				Ap K Pw					
								1900A.D.														
1039	6/18/67	2110-2230, 2250-2359	Gassendi	40W, 16S	Faint redness outside NW & SW (ast. ?) wall of crater.	Je 18 20 Jy 14 20	Je 30 20	59 50 59 18 54 15 59 50	2,1/2h	10.7	.00 .00	45 5R	-3.3 Je 22 05	3-, 7	Whippey	Northolt, England	6L?			290	3*	R
1040	7/17/67	0123-0147	Agrippa	11E, 4N	Shadow of c.p. barely distinguishable. Residual wall shadow normal black. Landslip very conspicuous, 10° bright.	Jy 14 20 Au 09 15	Jy 28 14	59 18 59 47 54 16 59 06	1/2 h	9.4	.07 .09	30 41R	-4.6 Jy 21 15	2+, 9	Bartlett	Baltimore, Maryland	5L, 283×	S=6 T=3		pc	4*	G
1041	8/13/67	1840-1855	Alphonsus	4W, 14S	Glow or hazy patch seen while using filters. Brighter than background. Not seen after 2055 or next nite.	Au 09 15 S 06 08	Au 25 09	59 47 60 36 54 10 58 45	1/4 h	7.6	.12 .15	6 2R	-6.4 Au 20 02	3-, 12+ sc+2	Horowitz	Haifa, Israel	8L?			291	3*	B, G
1042	9/2/67	0316-0418, @0420	" " or Parrot	"	A series of weak glows obs. Final flash at 0418. Similar weak glows had been seen in Petavius & from this position approximating Linné (?) @0420h Moseley saw flash in center--Alph. or Parrot. (confirm. of last flash of Whippey ?)	"	"	" " 58 33	1 h, 3s	27.1	.83 .85	245 +61S	+13.0 Au 20 02	4+, 25-	Whippey, Moseley	Northolt, England, Armagh, Ireland	6L, 64× 10R. 80×	S=G S=F		292, 294 p 3	5* 5*	B
1043	9/11/67	0032, 0045	nr. Sabine	20:E, 2N	A black, rectangular-shaped cloud vis. in M. Tranquill. moving W-E (IAU ?) & dissipated nr. term., surrounded by viol. color. Bright yellow flash at 0045. (obs. in response to request to obs. impact of Surveyor V at 0046).	S 06 08 O 04 14	S 22 00	60 36 61 14 54 02 58 33	13m	6.5	.17	353 13R	-6.7 S 18 17	1+, 4+ sc-1	Jean, et al. (27 obs., 21 telescopes)	Montreal, Canada	3-6R's & L's	S=G		292 p 3	3	D, V, R
1044	9/16/67	2350-2355	Aristarchus, Herodotus	47W, 23N 48W, 22N	Dark streaks on E. (ast. ?) outside walls of both craters. No shadow from Herod. wall. Drawings. (wall < 18° slope if no shadow normally).	"	"	" " 55 11	5m	12.5	.37 .38	66 18R	-1.7 S 18 17	4-, 18	Seeliger	Dresden, Germany	30L, 90, 140×			293	3	D
1045	9/17/67	0205-0221	Aristarchus	47W, 23N 25	A rimtop craterlet on SW rim appeared almost as bright as c.p. thru a Wratten filter (red) but no brighter than a lower central wall & rim thru a Wratten 48 (blue) filter. Inner W. slope of craterlet displayed a bright red color which became less & less noticeable until at 0212h it was no longer brighter than other parts. At 0217 it flared again a brighter red for 1m. (indep. confirm. of Seeliger for activity in Aris. ?) Corralitos MB did not confirm.	"	"	" " 55 09	1/4 h	12.6	"	67 19R	-1.6 S 18 17	2, 12- sc-2	Delano, Corralitos Obs.	Fall River, MA Organ Pass, New Mexico	12.5L, 400×, 24 L, MB	S=5 T=5		294, 392	4*	R, G
1046	9/18/67	0408-0423	Agrippa	11E, 4N	Dark landslip on NW wall invis., wall here 5° bright.	"	"	" " 54 44	1/4 h	13.7	.40 .42	80 91R	-0.5 S 18 17	4-, 18+ sc-1	Bartlett	Baltimore, Maryland	3R, 200×	S=5-1 T=4-2		pc	4*	D? or B?
1047	9/18/67	2100?	Gauss	75E, 38N	In a polaroid filter W. wall was missing. Seen also in 4-in finder & 12.5-in refl. His conclusion was that W. wall reflected polarized light.	"	"	" " 54 31:		14.3:	.41: .44:	88: 163:R	+0.1: S 18 17	"	Chilton	England	12.5L, 200× 4R	?		292 p 3	3*	D
1048	9/20/67	2111-2146	Gassendi	40W, 16S	Faint blink & red glow SSW of c.p. at 2111h. At 2118 was fading & moving slightly N. Gone at 2120. At 2122h suspected blink close to SW of c.p. Gone at 2123h. At 2143 both obs. suspected a faint blink someway W of c.p. Lasted only 2.5m Other craters examined with no LTP. Observers are dubious of reality of phenom.	"	"	" " 54 06	1/2 h	16.4	.46 .51	113 117S	+2.2 S 18 17	6-, 38+ ms ?, sc+1	Moore, Moseley	Armagh, Ireland	10R, 254×	S=P-F		294	2	R, B, G
1049	10/10/67	0215	SE of Ross D	24E, 12N	Bright area moved 80km/hr toward SSE & expanded as contrast reduced. Corralitos MB did not confirm.	O 04 14 N 02 02	O 19 08	61 14 61 26 53 58 57 53		6.3	.19	347 11R	-8.3 O 18 10	5, 34+ ms ?	Harris, Corralitos Obs.	Tucson, AZ? Organ Pass, New Mexico	24L, MB			pc to M 392	3*	B, G
1050	10/13/67	1917-2000	Gassendi	40W, 16S	Phenomenon (brightening ?) nr. NW (ast. ?) lasting for 3s. Cont'd obs. for 45m but nothing else unusual. (nr. Gass. or in it ?) Corralitos MB did not confirm.	"	"	" " 55 17	3s	10.0	.36 .32	33 -7R	-4.9 O 18 10	4, 17	Henshaw, Corralitos Obs.	Mansfield, Eng. Organ Pass, New Mexico	8.5L, 112× 24L, MB	S=E		295, 392	3*	B?
1051	10/15/67	0338-0342	Aristarchus	47W, 23N	Ravine in E. glacis invis. for its full length tho normally a sharp black fine line at this time. E. wall craterlet also invisible.	"	"	" " 54 42	4m	11.3	.40 .37	49 2R	-3.3 O 18 10	4, 13	Bartlett	Baltimore, Maryland	4L, 280×	S=5 T=5		pc	4*	G
1052	10/19/67	0500	Kepler	37W, 7N	It was 1 mag. brighter than Aristarchus when normally Aris. is 0.3mag. brighter than Kep. Corralitos MB did not confirm.	"	"	" " 53 59		15.4	.50 .51	113 117S	+0.8 O 18 10	2+, 9	Classen, Corralitos Obs.	Pulsnitz Obs. E. Germany Organ Pass, New Mexico	8R 24L, MB		LION	284	4*	B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ_{π}	Colong., Term. Dist.	Days fr. FM & nr. FM	Solar K_D, ΣK_D	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ , β		m d h	m d h	π_R , π_A , π		d	d	°	m d h				Ap K P_R					
								1900A.D.														
1053	11/15/67	0540-0600	Aristarchus, Cobra Head	47W, 23N 48W, 24N	Obs. reddish color N. & E. of Aris. & more intense color nr. E. (IAU ?) rim of Cobra Head. Red color nr. C.H. confirmed by Tombaugh. Obtained 10 photos between 0543-0549h in 3 spectral bands (blue, yellow, red, & integ. light). No change dur. obs. per. but spot got smaller at moments of good seeing. Isodensitrometry of photos. At Corralitos 0152-0155 on 24-in image intensifier & filter sys. photos at 0320-0330h. Harris at Tucson got spectra. Neither of latter 2 show anything unusual. Its edges were nebulous even at best seeing. Size @ that of Cobra Head.	N 02 02 N 30 14	N 15 08	61 26 61 04 53 59 54 00		13.0	.50 .50	67 19R	-2.0 N 17 05	4-,17-	Cross, Tombaugh, Harris Dunlap	Las Cruces, New Mexico ; Tucson, AZ, Organ Pass, New Mexico	12L, 800× 24L, MB	S=VP	M	pc to M to C	5*	R, G
1054	11/17/67	1836-1850	Plato	9W, 51N	Faint blink under SW wall. Nothing seen vis. Gone by 1839. Reappeared at 1841, then gone by 1850h. Checks till 0200h were neg. Obs. dubious of reality of phen.	"	"	" " 54 09	1/4 h	15.5	.55	97 92S	+0.5 N 17 05	1-, 3-	Moore, Moseley	Armagh, Ireland	10R, 260×	S=P		300	2	R
1055	12/13/67	2140	Aristarchus	47W, 23N	Reddish color E(IAU ?) side of crater, vis. intermittently. Viol. color W. side only, around moon's limb. Seen by 2 obs. at separated places. Filters used. (chrom. aberr. ? She gives col. 48° but this doesn't agree with time. Obs. scheduled for perigee & apogee).	N 30 14 D 28 19	D 12 18	61 04 60 16 54 05 54 09		12.2	.53 .47	56 9R	-3.1 D 16 23	2-,10-	Jean, et al.	Montreal, Canada	4R, 140×		M	1		R, V
1056	12/16/67	2200 ?	"	"	Crater took on an unusual appearance on inner NE (ast. ?) wall. Showed a very pale blue & the opposite wall a pale red color seen in no other features. Lasted only 10m & survived a change of eyepiece.	"	"	" " 54 58	10m	15.2	.61: .58:	92: 45:R	0.0: D 16 23	3 ,16+ sc-2	Farrant	Cambridge, England	8L	S=VG		297	3	V, R
1057	12/17/67	2231-2310	W. limb	90W,	Viol. glow, disappearing intermittently. (chrom. aberr. ? altho similar to other rept's. Observations scheduled for perigee & apogee).	"	"	" " 55 24	3/4 h	16.3	.64: .61	106 16R	+1.0 D 16 23	4-,17+ sc-1	Jean, et al.	Montreal, Canada	4R, filters 6L			pc	1	V
1058	1/ 8/68	1630-1640	"	"	Purple color on limb. (chrom. aberr. ? obs. scheduled for perigees & apogees).	D 28 19 Ja 25 00	Ja 09 13	60 16 59 23 54 11 54 16	10m	8.5	.36	11 -79R	-6.9 Ja 15 16	3-,11	"	"	4R ?			"	1	V
1059	1/12-/68 13	2320-0118	"	"	Purple color on limb. (chrom. aberr. ? Obs. scheduled for perigees & apogees). Corralitos MB did not confirm.	"	"	" " 55 03	2 h	12.8	.56	61 -29R	-2.7 Ja 15 16	3+,22+ 3 , 18 sc-1, ms	", Corralitos Obs.	", Organ Pass, New Mexico	", 24L, MB			", 392	1	V
1060	3/ 4/68	0211-0444	Theophilus, Cyrillus	26E, 11S 25E, 13S	Obscuration, intermittent. (atm. turb. ? Obs. scheduled for perigees & apogees. She gives col. as 321° but prob. calc. on Mont. time, not UT, in dark ?).	F 18 16 Mr 17 02	Mr 05 07	59 28 60 21 54 11 54 17	2.5 h	4.9	.53	324 - 9R, -10R	-10.6 Mr 14 19	4+,24	Jean, et al.	Montreal, Canada	4R ?			pc	1	G
1061	3/ 9/68	0444-0619	Haemus mts, Manilius	8E, 14N	Bright pts. on term. over Manilius. (descrip. doesn't fit col. circumstances as Manilius is >30° from term. She gives 21° col., prob. calc. on loc. time not UT. Obs. scheduled for perigees & apogees, therefore biased.).	"	"	" " 55 41	1.5 h	9.9	.71	26 34R	-5.6 Mr 14 19	2+, 8- sc	"	"	"			pc	1	B
1062	3/14/68	0132-0206	Aristarchus	47W, 23N	Trident Moon Blink on S. wall crest & c.p. & white spots in crater. No color seen vis. Blink not seen earlier or later. Other craters blinked some but not as strongly. Only Aris. areas blinked when moon blink was moved around. Observers consider blinks real. Alt. of moon was 50°. Drawings. Corralitos say they did not confirm, but they rep't Copernicus, not Aris.	"	"	" " 59 19	1/2 h	14.8	.86 .89	85 38R	-0.7 Mr 14 19	5 ,29	Olivarez, Maley, Etheridge, Corralitos Obs.	Edinburgh, Texas, Organ Pass New Mexico	17L, 125×, MB 24L, MB	S=5 (F-G)	MBDC	pc, 392	5*	R
1063	4/ 2/68	0115-0130	Demonax, Cleostratus	60E, 78S 78W, 61N	Green color, yellow-reddish (over Demonax ? chrom. aberr. ?). Diffused cloud seen outside disk over Leibnitz mts. in Cleostratus area. (features misident. ? Leibnitz mts. nr. Demonax not Cleo. Terr. cloud ? Obs. scheduled for per. & apo.).	Mr 17 02 Ap 14 07	Ap 01 23	60 21 61 05 54 03 54 04	1/4 h	4.0	.50 .56	316 16R, 122R	-11.2 Ap 13 05	4 ,21+	Jean et al.	Montreal, Canada	4R, 6L ?			pc	0	V, R, G
1064	4/3-/68 4	2229-0015	Posidonius	29E, 33N	Peculiar haziness in NE (ast. ?) corner of crater. Greenish-yellow tint similar to M. Crisium at FM. Central crater was clearly vis. N. wall showed no detail at all.	"	"	" " 54 21	1.75 h	6.0	.56 .63	341 10R	-9.2 Ap 13 05	3+,16+ ms-2	McConnell	Antrim, Ireland	3.5R, 117×	S=E		298	3*	G, V, R

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong., Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ_o , ϕ_a		m d h	m d h	π_p , π_ϕ , π_r (1900 A.D)		d	d	°	d, m d h	K_p, ΣK_p			Ap K Pw					
1065	4/4/68	1845-1920	W. of Menelaus	12E, 15N	Small area just E(ast.) of Menelaus was seen with a reddish color which gradually faded. Area was as large as Menelaus & had just come into sunlight. (he dome just W. (IAU) of Menelaus ?).	Mr 17 02 Ap 14 07	Ap 01 23	60 21 61 05 54 03 54 38	1/2 h	6.7	.59 .66	348 0R	-8.5 Ap 13 05	3+,16+ ms-1	Darnella	Copenhagen, Denmark	6R,183×			297 p52	3*	R,G
1066	4/6/68	2030-2115	Alphonsus, Plato, St. Wall	4W, 13S 9W, 51N 8W, 22S	Suspected glow inside W. (ast. ?) wall at 2038. Also dark patches in Plato were prominent & a shadow from N. end of St. Wall going toward Birt. Drawing of latter.	"	"	" " 55 52	3/4 h	8.8	.67 .73	15 11R, 6R, 7R	-6.4 Ap 13 05	6,35- ms+1	Wise	Slough, England	17L,190, 350×	S=E		298 p44	1	B,D
1067	4/11/68	2200 ?	Aristarchus	47W, 23N	Crater had on NE (ast. ?) wall a very pale blue color & opposite wall a pale red. No other crater showed color. (similar to # 1056).	"	"	" " 60 15		13.9:	.88: .92:	76: 29:R	-1.3: Ap 13 05	3,18+ ms-2	Farrant	Cambridge, England	8L	S=VG		299	3	V,R
1068	4/13/68	0500:-0545	" Pytheas, Euler ?, Censorinus, Plinius ?, Proclus, Menelaus, Manilius	" 21W, 21N 29W, 23N 33E, 1S 24E, 15N 46E, 16N 16E, 6N 8E, 15N	Star-like pts. in the craters. Only Aris. identified certainly, rest fairly certain except Euler & Pinius. Seen in 6-in refr. at 50× but not in 36-in refl. at 400× where they were bright, but not star-like pts. Seen later in 12-in refl. at 80× in another bldg. Seen 1st @ 1/2 h before totality ended, but not earlier dur. tot. (tho't by author (WSC) to be geom. & instrumental = power effect).	"	"	" " 60 54	3/4 h	15.2	.95 .96	90 43R 69R 61R 123R 114R 136R 106R 98R	0.0 Ap 13 05	5-,28+ ms	Cameron, Laczo	Greenbelt, Maryland	6R,50×, 36L,400× 12L,80×	S=E			4	B
1069	4/26/68	0300 ?	Aristarchus	47W, 23N	Gas luminescence in the crater.	Ap 14 07 My 12 17	Ap 29 09	61 06 61 25 53 58 54 27:		28.1:	.41:	250 +23S	+12.9 Ap 13 05	6-,30-	Kozyrev	Crimea ?, Russia			F,C	387	3*	B,G
1070	5/2/68	0120-0214	"	"	Bright area in crater, surrounded by a faint glow. May have been atm. disp. Glow fainter at 0156 & imperceptible at 0214h. (Kelsey & Ricker consider obs. abnormal).	"	"	" " 54 22	1 h	4.5	.57 .63	323 -84R	-10.5 My 12 13	5-,21-	Doughty	Red Bank, New Jersey	8L,120×		ALPO-R	pc	3*	B,G
1071	5/5/68	2000 ?	Alphonsus	4W, 13S	Did not see gray patch SE(ast. ?) of c.p. Noted W. (ast. ?) dark patch was invis. while S. one was seen easily, emerging from shadow. On 7th all 3 clearly vis. with the darkest one the invis. one on 5th.	"	"	" " 56 30:		8.2:	.73: .76:	8: 4:R	-6.7 My 12 13	1+, 8- sc-1	Farrant	Cambridge, England	8L,220×	S=G		299	3*	B,G
1072	5/7/68	0100-0200	Messier, Thaetetus, Pitatus	46E, 3S 6E, 36N 14W, 30S	Long white streaks E. (ast.) of Messier (A ?, if A could be rays). 3 dark pts. in area of Thaet. Dark shadow, horizontal-shaped at Pit. >. (I didn't find anything to produce such a shad. Obs. scheduled for peri. & apogee).	"	"	" " 57 33	1 h	9.5	.74 .80	24 70R 30R 10R	-5.4 My 12 13	7-,38- sc	Jean et al.	Montreal, Canada	4R,6L			pc	5*, 1, 2	B,D
1073	5/7/68	0300-0340, 0540-0600	Messier, Messier A	46E, 3S 45E, 3S	The ray-tail halo (in N. ray) showed a possible enhancement in blue filter at 1st obs. per. but not seen at 0330. Later enhancemant was indicated in red filter but not apparent at 0600h. The red enhancement is very unusual; but has been suspected on a few previous occasions. Not seen vis. (confirm. of Jean ?)	"	"	" " 57 35 57 39	h ?	9.6	"	25 71R 70R	-5.3 My 12 13	"	Kelsey	Riverside, California	8L ?			299 p53	5*	V, R
1074	5/7/68	2048-2105	Plato, Clavius	9W, 51N 13W, 58S	Red color N. of landslip in W. wall seen in blink & vis. Vanished by 2105h. Had not returned at 2125. (Moore has wrong date in his extended catalog.). In Clav. large light patch on floor; very plain at 220× & 180×. Enclosed area bounded by shadow of E. wall & a line on W. running from center of Porter to E. edge of Rutherfurd, passing @ 30km E. of crater D. If it is a permanent marking he had never noticed it before. (a prominent Tycho ray lies here--see Kuiper Atlas).	"	"	" " 58 23	1/4 h	10.2	.78 .83	33 24R 20R	-4.7 My 12 13	"	Farrant	Cambridge, England	8L,220×	S=G		"	3*, 3	R, B
1075	6/1/68	2100 ?	Aristarchus	47W, 23N	Gas luminescence in the crater.	My 12 17 Je 10 03	My 26 12	61 25 61 16 53 56 55 50		5.5:	.71:	339: -68:R	-9.0: Je 10 20	4,24-	Kozyrev	Crimea ?, Russia			F,C	387	3*	B,G
1076	6/6/68	2100-2314	Palus Putredinus, Archimedes	3E, 25N 5W, 30N	2 bright spots in mare nr. term. of variable intensity. Dark patches in Arch. which turned purple with 80-25 filters. (obs. scheduled for peri. & apogees).	"	"	" " 59 50	2 h	10.6	.89	41 44R, 36R	-3.9 Je 10 20	3+,10	Jean, et al.	Montreal, Canada	4R 6L			pc	2	V,B,D
1077	6/9/68	2135-2145	Gassendi	40W, 16S	Blink inside NW wall. Trees stopped obs. at 2145h. At 2225 no blink vis. (Moore has date as June 6th, 1958=misprint ? as there weren't blink sys. then. Moon at low alt. ?).	"	"	" " 61 15	10 m	13.6	.99	88 48R	-0.2 Je 10 20	3,16+ sc-1	Miles	England	5R,120×		Mo	300	2	R

No.	Date	UT Time	Feature	Selenographic Coordinates λ	β	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		°	°		m d h	m d h	π_p ' " π_a ' " π ' " 1900 A.D		d	d	°	m d h	K_p, ΣK_p			Ap K Pw.					
1078	6/10/68	0235	nr. Endymion & Mare Humboldt	65:E,	56N	While waiting for reappearance of Antares from a grazing occultation at 13° ±4°, P.A. saw a prolonged blue flash lasting from minimum of 1/2 s to a max. of 2.0 s. Several others along obs. path of several miles also saw it; so not a local phenom. (located 38° from cusp, azimuth =157°).	Je 10 03 Jy 08 09	Je 22 19	61 16 60 40 54 01 61 16	1-2 s	13.8	.00 .00	80 145R	-0.6 Je 10 20	6 ,34 sc	Provenmire, Robinson, et al.	Hamburg, Pennsylvania	6L, 105×	S=G alt. 20°		pc	5*	V, B
1079	7/1/68	0215-0250	Theophilus, Cyrillus, Clavius	26E, 25E, 13W,	11S 13S 58S	Very clear double walls (saw terraces?) on Theoph. Bright straight lines cutting circle in 1/2 in Cyr. Green, yellow, red colors on term. over Clav. (chrom. aberr. ?) without filters. (obs. scheduled for peri. &apogees. Clav. in dark).	"	"	" " 56 50	1/2 h	5.2	.74	336 2R 1R -37R	-9.0 Jy 10 03	3+, 18	Jean, et al.	Montreal, Canada	4R, 6L			"	1	B, R, V
1080	7/4/68	0130-0345	White spot E. of Picard, Sinus Medii, Blanchanus	56E, 0: 20W,	15N 7:N 63S	White patch W. (ast.) of Picard. (spot is always there). Dark area between Marco Polo-Bode & Ukert. (dark mts. E. of Copernicus). Blanch. surrounded by colors intermittently. (chrom. aberr. ?)	"	"	" " 58 52	2 h	8.2	.84	13 69R 13R -7R	-6.0 Jy 10 03	3 ,19	"	"	"			"	0	B, D, V, R
1081	7/5/68	0405-0415	S. pole	26W,	90S	A kind of vapor cloud coming from S. pole, vis. intermittently. (atm. turb. ?).	"	"	" " 59 33	10 m	9.3	.89	26 0R	-4.9 Jy 10 03	3-, 16	"	"	"			"	1	G
1082	7/6/68	2210-2352	Teneriffe mts., Fontanelle	14W, 17W,	47N 61N	Lime green bright color on 1 peak of Teneriffes. A form of a C sparkling bright pts. between claws of Font. on terminator. (peri., apo. program).	"	"	" " 60 26	1.5 h	11.0	.95	47 33R 30R	-3.2 Jy 10 03	2+, 14	"	"	"			"	1 1	V, B
1083	7/7-/68 8	2222-0023	Conon?, Plato, Teneriffe mts.	3E, 9W, 14W,	23N 51N 47N	Rectangular-shaped patch which was darkening & lightening at Conon? (written Cannon, but there is no Cannon) Dark cloud covering the area there for 2-3s. Brilliant spot SE(ast. ?) of Plato, 3 others like stars toward the N. Lime green on Teneriffes to N. pole. (chrom. aberr. ? obs. in peri., apo. program).	"	"	" " 60 39	2 h	12.1	.99	60 63R 51R 46R	-2.1 Jy 10 03	3 ,14, 2 ,12+	"	"	"			"	2*, 1, 0	G, D, B, V
1084	7/14/68	2100?	Kepler	37W,	7N	Kepler was 0.5 mag. brighter than Aristarchus, where normally latter is 0.3 mag. brighter than Kepler.	Jy 08 09 Au 05 03	Jy 20 09	60 40 59 52 54 08 56 24:		19.0:	.24:	146: 71:S	+4.8: Jy 10 03	6-, 26 sc+1	Classen	Pulsnitz Obs. E. Germany	8R			293	3*	B
1085	7/18/68	0050-0130	Aristarchus, Cobra Head	47W, 48W,	23N 24N	Distinct red glow & obscur. 1st at 0050 S. of C.H. & same size. At 0052h saw color on S. wall of Aris. Both persisted till 0100h then both faded, then brightened, then faded. Plato, Gassendi & Kepler checked, with neg. results. Obscured area reached greatest extent at 0125h when it was 1/2 size of C.H. & SSE (ast. ?) of it. Moore was alerted to it & saw it in blink, but not vis. at 0107-0120.	"	"	" " 54 35		22.1	.42 .35	183 44S	+7.9 Jy 10 03	3+, 17	Moseley, Corvan, Moore	Armagh, Ire. " Selsey, Eng.	10R, 255× 3R, 120×			299	5*	R, G
1086	8/3/68	0730-0745	Linné, Möltke, Sabine, Lyell, Proclus, Limb	12E, 25E, 21E, 42E, 46E, 90W?	27N 0 2N 14N 16N	White spot W. of Linné; Möltke, very bright; reddish color on Sabine; dark spot in Lyell (its floor is dark); brilliant pt. N. of Proclus; purple-viol. color on limb. (chrom. aberr. ? where edges of field nr. Linné & W. limb ? peri., apo. program).	"	"	" " 59 36	1/4 h	8.8	.93	22 24R 47R 43R 64R 68R -68R ?	-5.2 Au 08 12	4 ,20	Jean, et al.	Montreal, Canada	4R 6L			pc	3*, 3*, 0, 0, 3, 0	B, R, D V
1087	8/9/68	0205-0345	Herodotus	48W,	22N	With naked eye saw a bright spot in NW part of moon; tho't it was Aristarchus, but 7× binoculars showed it to be Herod. which was brighter than Aris. ! Still apparent at 0245h, but was normal at 0345h. (at FM, must have been extraordinary event)	Au 05 03 Au 31 02	Au 17 03	59 52 59 18 54 14 58 28	1.7h	14.6	.14 .15	92 44R	+0.6 Au 08 12	4-, 22 ms	Lowe	Springfield, Virginia	naked eye 7× binoc.	S=VG		pc	4*	B
1088	8/31-/68 9/1/68	2354-0231	Apennines	20:W,	15:N	Unusual dark area in S. region. (peri., apo. program).	Au 31 02 S 25 20	S 13 22	59 18 59 48 54 14 59 16	2.5 h	8.0	.03	12 -8:R	-5.9 S 06 22	4+, 22, 4-, 16+	Jean et al.	Montreal, Canada	4R, 6L			"	3	D
1089	9/10/68	0258-0614	Cleomedes, Mare Crisium, Limb	56E, 54:E, 90W?	26N 11:N	Dark color tints in N. area on Cleom.; rough surface in SW part of M. Cris.; viol. color on limb. (chrom. aberr. ?; peri., apo. program).	"	"	" " 55 20	3h	17.2	.39	125 1S +1S 145S	+3.3 S 06 22	2+, 13	"	"	"			"	2, 2, 0	D, V
1090	9/18/68	0800?	Gauss	75E,	38N	Observing thru polaroid filter, E. (IAU ?) wall was invis. but became vis. when filter was rotated, indicating refl. of polarized light. Same area examined since, but no such phenomenon.	"	"	" " 55 44:		25.3:	.65: .70:	223: 118:S	+11.4: S 06 22	2 , 6+	Chilton	Hamilton, Canada	10L			301	3*	B?

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ_m	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom Type
	m d y	h m		λ , β		m d h	m d h	π_p π_a π		d	d	°	d, m d h	K_p, ΣK_p			Ap K Pk					
				° , °				1900A.D.														
1091	9/30/68	0230-0245	M. Marginis Goddard Sacrabosco Messier Messier A Schneckenberg W. Bond Barrow Goldschmidt Arnold Gärtner	80:E, 12:N 88 E, 15N 16E, 26S 46E, 3S 45E, 3S 6E, 10N 5E, 64N 8E, 70N 5W, 70N 38E, 66N 33E, 59N	M. Marg. very dark; blue dark cloud moving W-E disappearing at term. swept over M. Marg. . Goddard & Sacrob. was vis. 1-3min. (terr. cloud ?). Bright rays at W. of Messier & A, intermmittent (normal in poor seeing ?). Dark spot in center of Schneck. Reddish color on Bond Barrow, Gold. Arnold, & Gärt. (chrom. aberr. ?, prog of peri. &apo. obs.).	S 25 20 O 23 15	O 11 17	59 48 60 41 54 08 58 42	1/4 h	7.6	.15	8 88R 96R 24R 54R 53R 14R 13R 16R 3R 46R 41R	-6.4 O 06 12	3 , 12	Jean, et al.	Montreal, Canada	4R, 6L			pc	1, 1, 1, 2, 0, 0, 0, 0, 0	V, D, G R, B
1092	10/ 1/68	2100 ?	Plato	9W, 51N	Lack of detail on floor, but wall detail easily resolved. (indep. confirm.)	"	"	" " 58 18:		8.5:	.19:	19: 10:R	-5.5: O 06 12	5-,23 ms-1	Bartlett, Beck	Baltimore, MD Ohio	,437×			302	5*	G
1093	10/ 3-/68 4	1930-1950, 0020-0140	Gassendi	40W, 16S	Slight blink (Eng.), arcuate in shape, N. of c.p. (Rawlingsdubious). Moore, with blink device saw none at 0020-0140h. No LTP in Gass., Ptol, or Aris. 5th or 6th.	"	"	" " 57 00	20m, 1.25 h	11.3	.29	52 12R	-3.1 O 06 12	6-,25-ms+1	Rawlings, Moore	Aylesbury, Eng. Selsey, Eng.	6L, low 12.5L, 360×	S=P		303	1	R
1094	10/ 4/68	1945	Promontory LaPlace	25W, 46N	Dark spot (or shadow ?) seen nr. the cape, slightly W. of the promontory. Has not seen it since. (if shadow, slope has to be >40°).	"	"	" " 56 34		12.3	.32	65 40R	-1.7 O 06 12	2 , 6+ ms+2	Peters	England ?	3R, 80×			304	1	D
1095	10/ 5/68	2330 ?	Aristarchus, Plato	47W, 23N 9W, 51N	Bright spot to right (west ?) of Aris. & bright lines on top of Plato, preceding ecl. similar to # 203. (she says this obs. was 1 day before ecl. but was 5 days before) & on Oct. 5, 1955 before ecl. of moon. (again date is wrong as age was 18d, more than 3d after FM).	"	"	" " 55 54		13.8:	.37:	78: 31R, 69R	-0.5: O 06 12		Jean, et al.	Montreal, Canada	4R 6L			pc	3	B
1096	10/ 9 /68	2330 ?	Plato Aristarchus Limb Terminator Mare Crisium	9W, 51N 47W, 23N 90W ? 52:E 53:E, 17N	Thin white cloud, intensity variable, faint bright shimmer on Plato. Lime green & viol. on limb, intermittent. (chrom. aberr. ? & atm. aberr. ?). Green on term. dark bandsSW of Cleomedes with bright end on term. turquoise color on N. & rose on Aris.	"	"	" " 54 19		17.5	.51:	128: 61:S 99:S 142:S	+3.5 O 06 12		"	"	"			"	0, 2, 2, 0	R, V, D, B
1097	10/11/68	0245-0305	Aristarchus Ariadaeus Darwin Proclus Limb	47W, 23N 17E, 5N 65W, 23S 46E, 16N 90W	Pink & blue on Aris. (chrom. aberr. ?) Ariad. very bright; large dark patch in Darwin; long dark shadow S. of Proc. with a very bright end. Viol. color on limb. (chrom. aberr. ?)	"	"	" " 58 42	1/3 h	18.6	.49 .55	141 86S 22S 104S -7S 129S	+4.6 O 06 12	1 , 5-sc-1	"	"	"			"	0, 2, 2, 0	R, V, D, B
1098	10/12/68	0430-0445	Catharina Cyrillus Aristarchus	24E, 17S 25E, 13S 47W, 23N	Pink & green color on Catharina; Cyr. on term. Reddish clear zone SW of Aris. (color real on Aris. ? since pink was on Cath. or was pink more viol. ?)	"	"	" " 54 08	1/4 h	19.7	.51 .59	154 2S 1S 73S	+5.7 O 06 12	6+,40+ sc	"	"	"			"	0, 0, 2,	R, V
1099	11/ 1/68	0030 ?	Alphonsus	4W, 13S	2 dark triangular patches on either side of c.p. were intermittently vis. --obscuration & luminescence. (date rep't. was 10/31/68 EST ? so, prob. Nov. 1 UT).	O 23 15 N 21 00	N 08 09	60 41 61 20 54 00 56 14		10.1:	.30:	36: 32:R	-4.2: N 05 04	8 ,50+ ms, sc-2	"	"	", filters			"	2	G, D
1100	11/ 1/68	0150-0206	Eratosthenes	11W, 15N	Red glow in the crater. Weak blink beyond ESE (IAU ?) wall. Visually, area would not focus & gave impression of fog cascading down slope, but no motion was vis. (Moore has misprint in time in his cat. extension--should be 0150-0206).	"	"	" " 56 11	1/4 h	10.2	"	37 26R	-4.1 N 05 04	"	Chilton	Hamilton, Canada	12L, 300×			301	3*	R, B, G
1101	11/ 4/68	0015-0030	Aristarchus Menelaus Manilius Möltke Pytheas	47W, 23N 16E, 16N 8E, 14N 14E, 0 21W, 21N	Blue-green color with pink aureole on S. wall of Aris. & red glow NE. Extremely bright flash on Men. & Man. each. Greenish glow on Möltke & on Pytheas. (chrom. aberr. ?).	"	"	" " 54 53	1/4 h	13.1	.40	73 26R 89R 81R 87R 52R	-1.2 N 05 04	5-,31	Jean, et al.	Montreal, Canada	4R, 6L			pc	0, 2*, 0	V, R, B
1102	11/26/68	0015-0048	Baily	30E, 50N	Dark path like a big question mark on its side; very dark W. of it with Baily as the point. (some highlands there with that shape, but wouldn't be dark unless shadows produced it).	N 21 00 D 19 12	D 05 15	61 20 61 28 53 56 58 17	1/2 h	5.7	.18	341 11R	-9.0 D 04 23	3-,14+ sc+2	"	"	"			"	2	D
1103	11/28/68	0142-0226	Nazireedin Messier Messier A Proclus	0 , 40S 46E, 3S 45E, 3S 46E, 16N	Blue-green bands both sides red color on Naz.; pale pink on W. side of Mess. & A. Pale pink on W. side of Proc. (chrom. aberr. ?).	"	"	" " 56 34	3/4 h	7.8	.25	6 6R 52R 51R 52R	-6.9 D 04 23	3-,15-	"	"	"			"	0	V, R

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	See-ing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ° , β °		m d h	m d h	π_p ′ π_a ′ π_t ″		d	d	°	m d h	K_p, ΣK_p			Ap. K Pw					
								1900A.D.														
1104	12/ 4/68	1900-2015	nr.Aristarchus, Plato	47W, 9W, 23N 51N	Blink in red & blue. Max. at 1910h S. of Aris. toward Herod. Feeble blink in Plato. (alerted by Middlehurst for tidal prediction).	N 21 00 D 19 12	D 05 15	61 20 61 28 53 56 53 58	1.75 h	14.5	.50 .48	88 40R 79R	-0.2 D 04 23	sc-1	D'All Ara	Switzerland	16L,140×		SI	1-68	3*	R,V
1105	12/ 7/68	0700?	Aristarchus, Kepler, Copernicus	47W, 23N 37W, 7N 20W, 9N	Bluing around the 3 craters, strongest at Aris. Lasted several days. Photos show 30% more intensity in blue filter than in red or neutral. Moon's declination most northerly. Obs. think it was due to atm. effects.	"	"	" " 54 04		17.0:	.57:	115: 112:	+2.3: D 04 23		Corralitos Observatory	Organ Pass, New Mexico	24L,MB			392	5*	V,B
1106	12/21/68	2100	Aristarchus	47W, 23N	Unusual brightening in area. (Apollo 8 watch).	D 19 12 Ja 17 00	Ja 01 15	61 28 61 02 53 58 60 33		2.1	.09 .08	295 -112R	-12.8 Ja 03 18	4+,21+	Mourilhe	Rio de Janeiro Brazil	8.5R		LION	305	2*	B
1107	12/22/68	2300	"	"	Light in the crater. (Apollo 8 watch).	"	"	" " 59 37		3.2	.13 .12	308 -99R	-11.7 Ja 03 18	4 ,20+	"	"	"		"	"	1	B
1108	12/23/68	0130-0200, 0200-0230, 0200-0240, 1200-1600, 1400-1600, 2328, 0830-1030	" , Grimaldi , Taruntius	", 66W, 5S 46E, 5N	Wick noted Aris. as 9-10th-8th mag. dimming & brightening. Pulsating part was a pin point. 5-7sec bluish-green at 0136-0156. Lehmann at 0156 saw increase nr. center. (confirm. ?). At 0200-0230 Kohlenberger saw Aris. B bright & prominent. 1/2 mag. gradually brighter than before; then diminished 1, 1/2 mag. Harris at 0200-0230 saw gradual brightenings, 4-5s to come up of whole crater. (confirm.). Schroter's Valley was almost same brightness but Aris. got brighter then dimmed. Harris saw SE quad. of Grimaldi brightened 3-4× on rim & area was elliptical out SE. Confirmed by Wilmington. No changes seen in India at 1400-1600. Guericke & Messier A normal at 2328 (Jean). Osawa saw Taruntius bright in red filter. (All Apollo 8 watches).	"	"	" " 59 32 59 03 58 40	1 h	3.3 3.8 4.2	.13-.16	310 -97R -116R 4R	-11.6 to -10.7 Ja 03 18	4-,22	Wick, Lehmann, Kohlenberger C. Harris Sinvhal Jean Osawa	Rapid City, SD " Fullerton, CA California ? Kodai Kanal, Ind. Mon treal, Can. Kyoto-ken, Jap.	4R ? 8L, 167, 212×	S=3-4		306	5* 5, 5, --- --- 3*	E, V, R
1109	12/24/68	0300-0600	Aristarchus	47W, 23N	Brightening at times, very active. Aris. A star-like; both brightening simultaneously, pulsing from 0300-0306 & star-like at N. side at 0323 (Kohlenberger). Harris saw Aris. brightening at times. (confirm. ?). Bunton saw nothing unusual (0300-0600) (alerted for tidal predict. by Middlehurst ? Apollo 8 watches).	"	"	" " 58 30	1/2 h	4.4	.16	323 -84R	-10.5 Ja 03 18	4-,17-	Kohlenberger C. Harris Bunton	Fullerton, CA California ? Hawaii			LION	305	4*	B,G
1110	12/24/68	1930-2000	Harbinger mts., Prinz	43W, 26N 44W, 25N	Bright yellow spot seen E. of Aris. fr S. end of Harbinger mts. to S. wall of Prinz. Back to normal at 2000h. Many other areas observed were normal. (alerted for tidal predict. by Middlehurst, & Apollo 8 watches).	"	"	" " 57 58	1/2 h	5.1	.19	330 -73R, -74R	-9.9 Ja 03 18	4-,17-	Deane	London, England	2R	S=E		307	1	R
1111	12/25/68	0200	Aristarchus	47W, 23N	Seen to brighten (in dark) although less intensity than Copernicus & Kepler. (also brightening ?) (alerted for tidal predict. by Middlehurst ?--Apollo 8 watch).	"	"	" " 57 39		5.3	.20	334 -73R	-9.6 Ja 03 18	5 ,25	Taboada	Mexico				308	1	B
1112	12/31/68	0330-0345	Aristarchus-Herodotus	48W, 23N	Terminator between the 2 was diminishing in brightness over edge of Herod. at 0345. 2 darker spots seen over same place. (alerted by Middlehurst for tidal predict.?).	"	"	" " 54 06	1/4 h	11.3	.45 .41	47 -1R	-3.6 Ja 03 18	4 ,17	"	"				"	1	D
1113	1/ 1/69	0315	Herodotus	48W, 22N	Brightness in edge of crater dimmed & a heavy darkness was noted thru course of cleft (Schroter's Valley ?). (alerted for tidal predict. ?).	"	"	" " 53 59		12.3	.48 .44	59 11R	-2.6 Ja 03 18	3-,16-	"	"				"	1	D
1114	1/ 3/69	0320-0350	Aristarchus-Herodotus	48W, 23N	Brightness between craters dimmed at 0345. Change in coloration in N. part of Aris. --gray & slightly pinkish. Became more remarkable at 0350 in almost all the extension of the cleft, (Sch. Vall. ?).	"	"	" " 54 04		14.3	.57 .51	88 40R	-0.6 Ja 03 18	1 , 2	"	"				"	3*	D,R
1115	1/ 4/69	0300-0345	"	"	Brightness increased slightly around Herod. & cleft (S. V ?) became darker than previous day. The dark gray & pink turned yellowish at 0345h in whole region of Aris. Bluing around crater in Corralitos MB. (photos ?). (confirm. of activity at Aris. ?).	"	"	" " 54 14	3/4 h	15.4	.59 .55	95 47R	+0.4 Ja 03 18	2-, 5+	" , Corralitos Observatory	" , Organ Pass New Mexico	, 24L, MB			" 392	5*, 5*	D,R,V

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ, β		m d h	m d h	πp πa π		d	d	°	m d h	Kp, ΣKp			Ap K Pw					
								1900A.D.														
1116	1/12/69	1200	Aristarchus	47W, 23N	Region showed same characteristics as previous days, perhaps a little darker color brown but more remarkable. Used red, blue & green filters & difference in color noted in & out of region. (permanent ground color seen?).	D 19 12 Ja 17 00	Ja 01 15	61 28 61 02 53 58 58 44		23.8	.85 .84	191 36S	+8.8 Ja 03 18	2+,12-	Taboada	Mexico		S=E		308	3	R
1117	1/22/69	0010-0030	Gassendi	40W, 16S	Eng. blink detected on outer E. wall. (in dark!).	Ja 17 00 F 14 04	Ja 29 03	61 02 60 11 54 04 57 56	1/3 h	3.8	.18	312 -88R	-11.5 F 02 13	1+, 7	Kilburn	England	6L, 192×		Mo	300	3*	R
1118	3/27/69	1842-1847	Alphonsus	4W, 13S	Nothing unusual at 1840; at 1845h Ringsdore saw a blurring, at 1842 Moseley saw a reddish-orange patch, confirmed by Moore. NNW of c.p. Moseley got a blink, but Moore did not because of too much sky light. Color was like Jupiter's red spot but less pronounced.	Mr 13 02 Ap 07 00	Mr 25 18	59 22 59 33 54 14 54 34	5m	9.5	.57 .59	20 16R	-5.1 Ap 02 19	2+,12-	Ringsdore, Moseley, Moore	England Armagh, Ire. Selsey, Eng.	15L, 350×			309	5*	R, G
1119	4/1/69	1835	Aristarchus	47W, 23N	Spectograms of an unusual red spot on W. slope at λ =.405, η =.680. Spot = 1-2 km diam. Molecules identified were N_2 & C_2. Later thru cloudis crater was bluer in Corralitos MB. (confirm. of activity at Aris. ?).	"	"	" " 57 33		14.5	.79	81 34R	-1.1 Ap 02 19	6-,26+ ms?	Kozyrev, Corralitos Obs.	Crimea, Russia Organ Pass New Mexico	50L? 24L, MB			310, 392	5*	R, G, V
1120	4/20/69	0040-0140	Petavius, Furnerius	60E, 25S 60E, 35S	Very dark shadow over these 2 craters (nr. term. ?) No color on limb. (moon at 65° alt. --normal aspect ?).	Ap 07 00 My 04 11	Ap 22 14	59 33 60 24 54 10 54 30	1 h	3.2	.42 .48	306 4R 4R	-12.2 My 02 05	4-,15-	Jean et al.	Montreal, Canada	4R, 500×	S=VG T=VG	LION		1	D
1121	4/20/69	2000?, 2020	Aristarchus, W. limb	47W, 23N 90W,	Allen saw an intense star-like pt. 9th mag. no ang. diam., 4-5× brighter than surroundings in ashen light. Obs. did not think it was an LTP. (but it is similar to many other reports). Marks did not note Aris. but a patch on limb was bright. Could disting. M. Frigoris, Aris. & maria very easily.	"	"	" " 54 23		4.0	.44 .50	315 -92R	-11.4 My 02 05	"	Allen, Marks	Cambridge, Eng. England	8R, 50× 4L, 62×	S=G-		210 p51	3, 3	B
1122	4/23/69	0100-0140	Pitiscus to S. pole, W. Mare Nectaris	30E, 50S 30E, 90S 27:E, 17:S	Reddish color from Pit. to S. pole. (chromatic aberration ?). Dark shadow W. of M. Ne ct. with white border on E. edge. No viol. color on limb. Drawing. (alt. =65°).	"	"	" " 54 15	1 h	6.2	.58	343 13R 10:R	-9.2 My 0205	2, 11	Jean, et al.	Montreal, Canada	4R, 500×	S=G	"		0, 1	R, D
1123	4/24/69	1934	Mare Vaporum	0, 18N	NW part of mare obscured for 4 min., gradually thinning.	"	"	" " 54 37	4m	8.0	.60 .65	4 4R	-7.4 My 02 05	3+,17	Bentley	England	8L, 320×	S=E		310	3*	G
1124	4/25/69	2020	Timocharis	13W, 17N	Flashing star-like pts. in area beyond the terminator. (atmosphere ?).	"	"	" " 55 05		9.0	.63 .68	16 3R	-6.4 My 02 05	4-,17- sc-2	"	"	"	S=VG		"	1	B
1125	5/3/69	0700?	Aristarchus	47W, 23N	Ruing around crater. Visible in monitor, but immeasurable in photos.	"	"	" " 60 14		16.3:	.96:	105: 127:S	+1.1: My 02 05		Smith, Gallivan	Corralitos Obs. Organ Pass, NM	24L, MB photos			392	5*	V
1126	5/19/69	2120-2200	Harpalus	44W, 53N	Brightening in crater. (inexperienced observers). (Apollo 10 watch).	My 04 11 Je 01 15	My 20 05	60 24 61 07 54 03 54 03	1.7 h	3.5	.49 .55	309 -95R	-11.6 My 31 13	3+,18	Numes, Nogueria	Rio de Janeiro, Brazil	18R			pc	0	B
1127	5/20/69	0318-0427	Aristarchus	47W, 23N	Brightenings, pulsations, scintillations, indep. seen by 4 obs. 1-2 mag. increases, ranged between 1-30 s. Most active per. was 0318-0320h, 0417-0427h (Las Cruces). (Apollo 10 watch).	"	"	" " "	10m, 1/2 h	3.8	.50 .56	313 -94R	-11.3 My 31 13	3-,16-	Cross, Olivarez, Kohlenberger, Gibson, Miller, Duarte, Harris	Las Cruces, NM Spain?, California "	6R			"	5*	B, G
1128	5/20/69	0340-0425 0343-0348 1935-2030 2100-2200	"	"	Calkins saw 1 major brightening up 2 mag. above steady state lasting ½-1.5s & another slow brightening lasting 5-10s. Kelsey saw brightening at 0343-48h. Gone at 1955h. Saw blue-white pulsating light that illum. inner walls, max at 1955h. Bury at 2100h saw crater very bright as an elliptical bluish spot. (Apollo 10 watch).	"	"	" " 54 05	10m, 2 h	4.4	.52 .59	320 -87R	-10.7 My 31 13	"	Calkins, Kelsey, Gomez, Bury	W. Covina, CA California, Spain, France	12L 4R		Mo	pc, 300	5*	B, V
1129	5/20/69	2110-2230	Harpalus	44W, 53N	Brightening in crater. (inexperienced observers. Apollo 10 watch).	"	"	" " "	1.3 h	4.5	.58	322 -83R	-10.6 My 3113	"	Numes, Nogueria	Rio de Janeiro, Brazil	18R			pc	0	B
1130	5/21/69	0340-0425	Aristarchus	47W, 23N	Scintillations in it. (indep. obs. ?) (members of Astronet). Kelsey saw a brightening but not on order of secs. as others reported. (atmosp. ? Apollo 10 watch).	"	"	" " 54 10	3/4 h	5.1	.53 .60	327 -80R	-10.0 My 3113	3+,22	Kohlenberger, Harris, Miller, Bell, Calkins, Kelsey	Fullerton, CA Torrence, CA Ojai, Duarte, CA W. Covina, CA, Riverside, CA	12L, 12L		LION	284	2	B, G
1131	5/21/69	2000-2100	Aristarchus-Herodotus	47W, 23N-48W, 22N	Slow orange-red blinking in the surrounding area. Seen less markedly the next nite. (Apollo 10 watch).	"	"	" " 54 14	1 h	5.4	.56 .62	335 -72R	-9.7 My 31 13	"	Brandli, Germann	Switzerland "	6R		"	"	5*	R, B
1132	5/21/69	2030	Aristarchus	47W, 23N	Crater was pink. (confirm. of Brandli & Germann. Apollo 10 watch).	"	"	" " "		"	"	"	"	"	Wald	Zurich, Switzerland				pc	5*	R

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ° , φ °		m d h	m d h	π p ′ ″ π a ′ ″ π ′ ″		d	d	°	d h	K_p, ΣK_p			Ap K Pw					
								1900A.D.														
1133	5/22/69	0428-0506	Aristarchus	47W, 23N	Brightenings & pulsations. 1st per. 0428-0440h(R&H); then 0500(R). 3rd per. 0506h (H). Pulsations intermittent & increase @1/2 mag. except 1 was 1-2mag. greater. (atmosp. ?). Cameron at 0130-0330 did not see Aris. in 12-in refl. at 40 × or 250×, & saw nothing abnormal. (Apollo 10 watch).	My 04 11 Je 01 15	My 20 05	60 24 61 07 54 03 54 19	2/3 h	5.8	.58 .63	338 -69R	-9.3 My 31 13	4-,19-	Harris, Ricke, Cameron	Tucson, AZ Greenbelt, MD	21L 8L 12L, 40, 250×			311	1	B,G
1134	5/22/69	2045-2105	"	"	Pinkish color less marked ton ite. Astronauts alerted & at 2212 reported no activity but could see crater & earthshine was strong nr. terminator. (Apollo 10 watch. spacecraft far fr. crater).	"	"	" " 54 32	1/3 h	6.4	.59 .65	346 -60R	-8.7 My 31 13	4-,19-	Wald	Zurich, Switzerland			LION	284	2*	R
1135	5/22/69	2120-2140	Atlas	44E, 47N	Rim toward sun was bright. Part of time was interrupted. (Apollo 10 watch).	"	"	" " "	"	"	"	347 30R	-8.7 My 31 13	"	Germann, Wild, Vieli	Zurich, Switzerland "	6L		"	", pc	3*	B,G
1136	5/22/69	2320	Aristarchus	47W, 23N	Brightening with pulsations. (atm. aberr. ? Apollo 10 watch).	"	"	" " 54 35		6.6	.59 .66	348 -65R	-8.6 My 31 13	"					"	284	1	B,G
1137	5/23/69	0232-0300, 0230	Biela, Maskelyne	50E, 55S 36E, 3N	Bright W. rim & 2 spots on N. &SE rim had blink (red--Trident MB device) & event was in progress at start of obs. Saw nothing without image tube. Could not focus camera so no photos. Blink had ceased when image tube was replaced. Temporary bright reddish spot nr. Mask., photographed. (Apollo 10 watch).	"	"	" " 54 38	1/2 h	6.7	"	349 39R, 25R	-8.4 My 3113	3 ,19-	Skinner, Perez Barry, Bernie, Madison	Edinburgh, Texas U.S "	17L, MB		"	", pc, 387	5* 5*	B,R B,R
1138	5/23/69	0304-0310	Manzinus	27E, 66S	A white bright patch caught attention On S. horn of moon. It enlarged & became colored pink & blue without filters & reddish in yellow (filter ?). At 0310h area became normal as rest of environment. (a real event ? mixed in with chrom. aberr. ? Apollo 10 watch).	"	"	" " 54 40	6m	6.8	"	349 16R	-8.3 My 31 13	"	Jean, Rousseau, Collier, Dumas, St.Cyr	Montreal, Canada "	4R, 8L, 5.25R 5.25R	S=G T=3			3	B,R,V
1139	5/23/69	0358-0417	Aristarchus	47W, 23N	Crater pulsating (Wald). Variations suspected at 0318, 0320-25 by E. Cross, 0417-27 by E. & L. Cross saw non-periodic short var., sudden increases 1-2 mag. & sudden to slow, 1-30s decreases to normal 0441-0446. (confirm. ?Apollo 10 watch).	"	"	" " 54 41	1/3 h	"	"	350 -57R	-8.3 My 31 13	"	Wald, E. & L. Cross	Zurich, Swit, Las Cruces, New Mexico	6L, 120×	S=F T=VG	"	284 pc	5*	B,G
1140	5/23/69	0528-0535	Rabi Levi	22E, 34S	3 small craters in it, middle one had a blink (Trident MB --red) very bright & the NW crater of the 3 had a dimmer blink. A few bright flashes were seen vis. by 3 obs. without the image tube, lasting 15s. Clouded out at 0525h. (alt. of moon was very low--atm. ? Apollo 10 watch).	"	"	" " "		"	"	351 13R	"	"	Perez, Gay, Skinner, Floodine	Edinburgh, Texas "	17L			"	3*	R,B
1141	5/23/69	1135-1245	Posidonius	29E, 32N	W. (ast. ?) rim of crater was yellow in integ. light, brownish to deep yellow in filter, with no blink. Hue seen thruout obs. (true ground color ? or seeing ? or true LTP ?) thin clouds. (Apollo 10 watch).	"	"	" " 54 50	> 1 h	7.1	.60 .68	354 23R	-8.0 My 31 13	3 ,19-	Osawa	Hyogo-ken, Japan	8L, 286×			312	3*	R
1142	5/24/69	0240	Aristarchus	47W, 23N	Ricker saw pulsations, partly confirmed by Kelsey. (Surprising that Aris. could be seen at F.Q. ! Apollo 10 watch).	"	"	" " 55 44		7.8	.63 .70	356 -51R	-7.4 My 31 13	3+,19-	Ricker, Kelsey	Marquette, MI Riverside, CA	10L 8L ?		LION	284	5*	B,G
1143	5/24/69	0506-0508	SE of Ross D	24E, 12N	Multiple albedo changes, 2 bright areas vis. at 0506, reduced at 0508h till only 1 low-contrast area seen. Obs. ended by poor seeing. (Apollo 10 watch).	"	"	" " 55 46		7.9	.64 .71	357 21R	-7.3 My 31 13	"	Harris	Tucson, Arizona	21L	S=F-P	"	"	1	D,B
1144	5/24/69	2110-2215	Censorinus	33E, 1S	It was brighter than Proclus between 2130-2145h. A very tiny cirrus veil present & Censor. appeared less bright & Proc. cont'd to look normal. Weather worsened at 2215h. (Apollo 10 watch).	"	"	" " 55 38	> 1 h	8.5	.66 .73	12 45R	-6.7 My 31 13	"	Nicolini	Sao Paulo, Brazil	12L			312	2	B,G
1145	5/25/69	0115-0156	2° S of Maskelyne	29E, 1N	Very vis. pink patch-red as seen thru a yellow filter. Photo of bright red spot nr. Mask. (confirm. --Apollo 10 watch).	"	"	" " 55 50	2/3 h	8.7	"	14 43R	-6.4 My 31 13	"	Jean, Barry, Bernie, (2) Madison	Montreal, Canada USA	4R		"	284, pc, 387	5* 5*	R, R,B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong., Term., Dist.,	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ, φ		m d h	m d h	1900A.D		d	π′ d	°	m d h	K_p, ΣK_p			Ap K Pw					
1146	5/25/69	0353-0547	Aristarchus	47W, 23N	At 0353h saw brightening of 1s intermittent pulsations of 1 mag., confirmed by Leasure at 0357; 0400 Freuland saw brightening. At 0514h Ricke, 1mag. at 0515-0530--low amp. variations seen by Ricke & Harris. At 0525h Sheridan saw bright. &puls. Harris at 0546-47h saw 2 brightenings in crater. (Apollo 10 watch-seen in dark at gibbous phase!). (indep. confirmation ?).	My 04 11 Je 01 15	My 20 05	60 24 61 07 54 03 55 54	2 h	8.9	.67 .74	14 -33R	-6.3 My 13 13	3+,13	Ricke, Leasure, Freuland, Sheridan, Harris	Tucson, AZ " " Wyoming Tucson, AZ	8L		LION	284, pc	5*	B,G
1147	5/25/69	0434-0438	Ross D	24E, 12N	Bright spot adjacent to NE segment of crater, 1.5-2" at greatest extent & much brighter than rim of Ross D. Fuzziness here & extensive obscur. of detail E. of Ross D. (Apollo 10 watch).	"	"	" " "	4 m	"	"	14 38R	"	"	Cross	Las Cruces, New Mexico	5R		"	284	3*	B,G
1148	5/26/69	2030-2105	Plato	9W, 51N	Had misty portion of SW(ast. ?) floor from 2030 to 2105h at which time it was gone. Clearly seen, had ill-defined boundaries & was an easy obj. to see. Alt. =33°. (Apollo 10 watch).	"	"	" " 57 10	1/2 h	10.4	.73 .80	35 26R	-4.7 My 13 13	2-, 8-	Farrant	Cambridge, England	8L, 160×	S=G		312 p 70	3*	G
1149	5/28/69	0121-0323	Aristarchus	47W, 23N	In red filter at 0218h, bright area on W. wall became 2× as bright as normal. Flare rose & faded to normal in ∠ 1m. Spot was 8km, centered at ξ=.682, η=.397, which is about same as pulsations at ξ=.683, η=.395 & nr. Kozyrev's April 1 event at .680, .405. Suspected a lesser flare at 0233h at .682, .397, but it may have been due to poor seeing. No events seen at Kepler. (Apollo 10 watch).	"	"	" " 5 27	2 h	11.7	.77 .84	50 3R	-3.4 My 31 13	3 ,16+	Delano	Taunton ?, Massachusetts	12.5L, 300×	S=F T=G		313	4*	R,G
1150	6/30-/69 7/1/69	2337-0000, 0002-0005	"	"	Se wall was orange, detected by Eng. MB. Fading by 2353h, only a trace at 2358h & disappeared at 0000h. Later, at 0002-0005h suspected again. Alt. was low. Bluing around crater seen at Corralitos Obs. in the MB, but immeasurable on photos.	Je 30 00 Jy 28 09	Jy 13 18	61 26 61 16 53 56 61 15	1/2 h	16.0	.03 .04	104 123S	+1.1 Je 29 20	2 ,10- ms-1	Moore, Altizer, Arabanel,	Sussex, Eng. Corralitos Obs. Organ Pass, New Mexico	12.5L, 360× 24L, MB	S=S		312 392	2, 5	R,G,V
1151	7/16/69	2130-2132, 2145	"	"	In dark part, it was very bright. (Author (WSC) saw nothing unusual at 0100-0115h July 17 & could not see Aris. Apollo 11 watch).	"	"	" " 54 20	1/4 h	2.3	.59 .61	299 -108R	-12.2 Jy 29 03	3 ,18+ ms+2	da Silva, Cameron	Paranaiba, Brazil Greenbelt, MD	10L 12L		LION	314	1	B
1152	7/17/69	0300-0325	"	"	Complete rim pulsating white light, @ 4-5th mag. Suddenly brightened at 0300h. Crater seemed to glow a brilliant white for @ 15m. 2 others confirmed from 0315-0325. Resumed its normal appear. after fading gradually at 0325h. (author (WSC) noted nothing abnormal at 0100-0115h & couldn't disting. Aris. Apollo 11 watch).	"	"	" " 54 27	1/2 h	2.5	.61 .60	302 -105R	-12.0 Jy 29 03	1+, 8	Philips	Midland, Texas	6L		"	"	3*	B,G
1153	7/17/69	2000 ?	SE edge of Mare Crisium	60:E, 20N	Saw a "mediocre" yellow light. Area photographed on 7/19/69 but no LTP noted. (Apollo 11 watch).	"	"	" " 54 42		3.2:	.63:	310: 10:R	-11.3: Jy 29 03	"	Hedervari, Hegyessy, Geller	Budapest, Hungary "	R, 200, 300×		"	"	4	R
1154	7/17/69	2013-2025	nr. Baillaud	60E, 80N	Noted pulsations nr. crater on NE limb. Duration of pulses were 2s. Saw again at 2015h & 2019h. Duration then @ 4s. No color seen. mag. of brightening @ 4mag. Donas noted at 2016h at crater more brightening than at limb. After 2019h nothing. (atm. ? these periods are similar to those between blow-ups & excursions of star images in seeing, but puzzling why it stopped. Apollo 11 watch). (indep. confirmation).	"	"	" " "	6 m	"	"	"	"	"	Delaye, Donas	Marseilles, Fr. Gama, France	6R 10R		"	"	2	B,G
1155	7/17/69	2144-2149	Aristarchus ?	47W, 23:N	Uncommon brightness of soft blue tone; gradual decrease till 2149h when it became normal. Max at 2146h. (low alt. ? Apollo 11 watch).	"	"	" " 54 48	5 m	3.3	"	311 -96R	-11.2 Jy 29 03	"	Travnik	S. America	4R, 100×	S=E	"	"	2	V,B
1156	7/18/69	0353-0421	", Grimaldi, Kraft limb	", 66W, 5S 72W, 16N 90W, 14:N	Tungside(?) saw a blue flash in Aris. Kohlenberger, Harris & Bell saw a 65km long limb brightening between Grim. & Aris., 1/3 of way from Aris. Harris saw Kraft brighten at 0416h. (Apollo 11 watch).	"	"	" " 54 50	50 m	3.5	.64	313 -94R -113R -137R -119R	-11.0 Jy 29 03	2 , 6+	Tungside(?) Kohlenberger Bell, Harris	California, Fullerton, CA Torrence, CA	8L 4.5L 12L		"	"	3*	V,B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ°, β°		m d h	m d h	π_p π_a π (′ ″ ′ ″ ′ ″) 1900 A.D.		d	π′ d	°	d, m d h	K_p, ΣK_p			Ap K Pw					
1157	7/18/69	0615- 0800	Aristarchus	47W, 23N	Crater was brighter than normal.(Apollo 11 watch).	Je 30 00 Jy 28 09	Jy 13 18	61 26 61 16 53 56 54 52	1.75 h	3.6	.64	314 -93R	-10.9 Jy 29 03	2 , 6+	Heath	Christchurch, New Zealand			LION	314	1	B
1158	7/18/69	1844- 1855	Kepler	37W, 7N	Saw crater bright. (Apollo 11 watch).	"	"	" " 55 05	11 m	4.1	.65	317 -80R	-10.4 Jy 29 03	"	Bartha	Jos. Vafo, Hungary	3R, 5L		"	"	1	B
1159	7/18/69 19	2000- 2130, 2020- 2100, 2300- 0015	Aristarchus, Schroter's Valley	47W, 23N 48W, 24N	Brightening in Aris. between 2000-2130h (deMathes). Mourao saw it & Sch. V. very bright from 2020-2100. (confirm.). Luminosity in Aris. strong & prolonged northward with impression of 2 lum. pts. Saw again at 2300-0015h. (Apollo 11 watch).	"	"	" " 55 08	> 4 h	4.2 to 4.4	.66	321-3 -83R -84R	-10.3 Jy 29 03	"	de Mathes, Mourao	Rio deJaneiro, Brazil	8R, 10R,? L ? 19.5R		"	"	4*	B
1160	7/18/69	2200- 2215	E. edge of Manzinus	26E, 66S	Saw nr. cusp (S.) on E. edge of Manz. that it was very bright. (in dark ?Apollo 11 watch).	"	"	" " 55 11	1/4 h	4.3	"	322 -8R	-10.2 Jy 29 03	"	Mourao	"	10L		"	"	2	B
1161	7/19/69	0005- 0007, 0053- 0057	N. of Peirce, nr. Jansen (orJanssen ?)	53E, 17N 28E, 14N (41E, 46S)	Saw a black spot or pt. N. of Peirce & 2 very dark shadows on Jansen floor. 2 overlapping craters N. of Jansen were very dark. (seeing was unsteady. Apollo 11 watch. If Janssen, overlapping crat. could be Brenner R. are none N. of Jansen, & it was in dark).	"	"	" " 55 12	10 m	4,4	.67	325 18R, -7R, (6R)	-10.1 Jy 29 03	1+, 4	Jean, Collack	Montreal, Canada	4R, 6R	S=G	"	"	0	D
1161a	7/19/69	0353- 0419	Grimaldi, W. limb	65W, 5S 90W,	Harris saw 20 brightenings or light flashes, lasting fr. 1/2 to3s at 03:53:56 (1/2s), 03:54:19 (1s),)3:54:55 (2s), 03:55:06, 03:56:54, 03:56:56, 03:58:37, 03:59:58, 04:07:28, 04:15:00, 04:16:02, 04:16:45, 04:20:29, 04:21:14. First 4 were confirmed by Bell. Harris also saw 100 mi(160km) long limb brightening (blue) between Aris. & Grimaldi, due W. of Aris., brighter than Aris. At 04:14 saw the brightening 1/2 way between Aris. & Grim. as pinkish or orange. Miller at 0417h saw a star-like pulse in W. (IAU ?) rim of Grimaldi. (confirm. of Harris'04:16:45 obs. ? Apollo 11 watch).	Je 30 00 Jy 28 09	Jy 13 18	61 26 61 16 53 56 55 17	1/3 h	4.5	.67	326 -99R -124R	-10.0 Jy 29 03	1+, 4	Harris, Bell, Miller	Torrance, CA Duarte, CA Ojai, CA	12.5L 4.5L		AADC	314	3*	B, V, R G
1162	7/19/69	0630	Aristarchus	47W, 23N	Saw a pulsating glow in crater extending toward N. (Apollo 11 watch).	"	"	" " 55 20		4.7	"	329 -78R	-9.8 Jy 29 03	"	Whelan	Wellington, New Zealand			"	"	2	B, G
1163	7/19/69	1500- 1800, 1600- 1801	Censorinus, Biot	33E, 1S 50E, 23S	Saw unusual brightness in Censor., brighter than Proc. for 3 h. Several obs. confirmed. Also saw wall (W.) of Biot unusually bright. Had obs. it without this condition several months before. (Apollo 11 watch. daSilva says Censor. phenom. not LTP, that obs. were inexperienced.).	"	"	" " 55 32 55 36	3 h	5.1	.68	333 6R, 23R	-9.5 Jy 29 03	"	d'Azevado, et al.	Paranaiba, Brazil	8L		"	"	0	B
1164	7/19/69	1755- 1910	S. cusp	90S	Saw an abnormally bright spot at end of S. cusp. Polariz. meas. at 3.6% at 1845-1847h. (Apollo 11 watch ?).	"	"	" " 55 40	1.25h	5.2	.69	334 0R	-9.4 Jy 29 03	"	Dzapiashvili	Georgia, Russia			"	"	5*	B
1165	7/19/69	1845- 1847	Aristarchus	47W, 23N	Pruss & Witte saw brightenings in NW wall for 5-7s, 1mag. over background. Apollo 11 crew saw the NW wall of a crater (prob. Aris.) was very bright & active at 1846. (confirmation by groups separated by 250,000 mi! Apollo 11 watch).	"	"	" " "	2 m	"	"	334 -73R	"	"	Pruss, Witte Armstrong, Aldrin, Collins	Bochum, Ger. at moon " "	6R, 36× binoculars " "		"	"	5*	B
1166	7/19/69	1930- 2130	", Theophilus	" 26E, 11S	Saw whole region of Aris. & environs as brighter than normal. Obtained 2 photos. Fox saw intermittent glow in Theoph. for > 2h(time not given). Ringsdore confirmed. (Apollo 11 watch).	"	"	" " "	2 h	5.3	.70	335 -72R	-9.3 Jy 29 03	"	Gervais, Fox, Ringsdore	Lodure, Fr. Notts, Eng. England	4.5R ? 6.5L 15L		"	"	5*	B, G
1167	7/19/69	2030- 2055, 2039- 2045, 2100- 2310	Aristarchus, Grimaldi	47W, 23N 65W, 5S	Fr. 2012-2030 crater was normal but then brightened 1 mag. & cont'd bright & constant. Delaye noted a flash & blue bright. at 20:45:25 nr. Grim. Thinon noted, just a flash at 20:44:30(white). daSilva saw a weak bright spot on W. border of Grim. between 2100 &2300h. Vasquez saw Grim. very dark. (not LTP ? Apollo 11 watch).	"	"	" " 55 42	2 h	"	"	336 -71R -89R	"	"	Oliver, Sabadell, Delaye, Thinon. daSilva, etal. Vasquez	Spain " Marseilles, Fr. France Paranaiba, Br. Valparaiso, Ch.	L 11R 19.5L, 13R 12L		"	"	2, 4*, 0	B, V D
1168	7/19-/69 20	2100- 0035	Aristarchus	47W, 23N	daSilva saw crater very bright in elliptical shape which extended to N. like a bridge between 2 pts. daSilva & Mourao saw a brightening in NW wall from 2124-2322h intermittently but cont'd. Wall was extraordinarily bright. Moseley detected an unusual bright. along NW wall, brighter than normal in earthshine & brighter than crater. It was not constant, but pulsated irregularly with freq. @ 20s & amp. @ .75-1.0mag. No color or obscur. was seen tho looked for. Clouds interrupted obs. Vasquez saw it as a very luminous pt. of mag. 1?. Carlos noted a bright. in	"	"	" " 55 44	3.5 h	5.4	.71	337 -70R	-9.0 Jy 29 03	"	daSilva, Mourao, Carlos, Moseley, Vasquez	Paranaiba, Br. " " Armagh, Ire. Valparaiso, Ch.	19.5L 13R 12L, 18R 10R 12L		"	"	5*	B, G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong., Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	See-ing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ, β ° °		m d h	m d h	π_p π_a π		d	d	°	m d h	$K_p, \Sigma K_p$			Ap K Pw					
								1900A.D														
1169	7/20/69	0053-0100	Jansen, Maskelyne, nr. Langrenus	29E, 14N 29E, 3-14N 60E, 7:S	Jean & Collack noted obscur. between Jansen & Maskel. from term. No features discernible here whereas Proc. & Theoph. were already vis. McNamara saw a flash nr. Lang. (meteor ?) (Apollo 11 watch).	Je 30 00 Jy 28 09	Jy 13 18	61 26 61 16 53 56 56 04	7 m	5.5	.65 .71	337 6R 37R	-9.1 Jy 29 03	1+, 6+	Jean, Collack, McNamara	Montreal, Canada "	4R 6L		LION	314	2, 0	G, B
1170	7/20/69	0355-0415	Proclus	46E, 16N	Texas group got a blink (red, Trident MB) on NW wall. Varied extremely. Increased in brightness in red. Clouds stopped obs. 5 confirmed visually. (moon nr. horizon, Apollo 11 watch . No blink if spurious ?).	"	"	" " 56 09	1/3 h	5.7	.66 .71	328 24R	-9.0 Jy 29 03	"	Gergoulis, Morley, Sevra, Skinner, Naumann	Edinburg, Texas " " "	17L. 169×		MBDC LION	pc, 314	3*	R, B, G
1171	7/20/69	0530-0540	Aristarchus	47W, 23N	Saw a fuzzy brightening nr. crater of ≤ 0.5' diam. (Apollo 11 watch).	"	"	" " 56 10	10 m	"	"	339 -68R	-8.9 Jy 29 03	"	Younger, Byl	Victoria, B.C. Canada	48L		"	314	4*	G, B
1172	7/20/69	0700	"	"	Saw a pulsing glow in it which cont'd less pronounced. (Apollo 11 watch).	"	"	" " "		5.8	.67 .72	340 -67R	-8.8 Jy 29 03	"	Whelan	Wellington, New Zealand			"	"	2	B, G
1173	7/20/69	0845	"	"	Saw it brighter in red filter. (Apollo 11 watch).	"	"	" " 56 11		5.9	"	341 -66R	-8.7 Jy 29 03	"	McIntosh	Auckland, New Zealand	14L		"	"	3	R
1174	7/20/69	1840	Theophilus	26E, 11S	Saw a flash on the c.p. of mag. 1.0, duration of 0.1s, no color. (meteor ?) (Apollo 11 watch).	"	"	" " 56 18		6.3	.68 .73	345 11R	-8.4 Jy 29 03	"	Delaye, Thinon, Donas, Jourdran	Marseilles, France " "	10R, 60×		"	"	1	B
1175	7/20/69	1955-2010	Aristarchus	47W, 23N	1955-2004h saw bright. in it pulsing with dur. of 10s. At 2005h its spot brightened, at 20:08:50-20:35:50 brightening & pulsations of variable dur. At 20:55:50 just a feeble flash. (prob. not atm. as period is too long, Apollo 11 watch).	"	"	" " "	1/4 h	6.4	"	346 -61R	-8.3 Jy 29 03	"	"	"	"		"	"	3*	B, G
1176	7/20/69	2023, 2100-2345	"	"	Saw a brightening in crater. (Apollo 11 watch).	"	"	" " 56 24	3.5 h	6.5	"	347 -60R	-8.2 Jy 29 03	"	Porta, Cordosa, daSilva	Spain, Rio de Janeiro, Brazil	16R		"	"	3	B
1177	7/20/69	2250-2315	Eudoxus	16E, 45N	Saw a weak reddish area on the NW-Ewall. Eng. MB showed it dark in blue & opaque in red. Reddening remained un changed while comparing it to adjacent region & Aristoteles. Color index was toward dirty orange. Seeing was variable (II. 5-III. 5). Color most apparent in good seeing & disappeared in poor moments. (opposite to expected if atm. ?). None of this in Aristoteles. (Apollo 11 watch).	"	"	" " 56 26	1/2 h	6.6	"	348 4 R	-8.1 Jy 29 03	"	Nicolini	Sao Paulo, Brazil		S=II. 5-III. 5	"	"	3*	R, G
1178	7/20/69	2220-2300	Grimaldi	68W, 5S	Weak flashes in the SE part; intermittent. Difficult to discern & follow. (Apollo 11 watch).	"	"	" " "	2/3 h	"	"	348 -80R	"	"	daSilva	Curitiba, Brazil	12R, 60×			pc	3*	B, G
1179	7/21/69	0930	Maskelyne	30E, 3N	Whitish glowing brightening. Shadowy filling of whole crater. (Apollo 11 watch).	"	"	" " 56 40		6.8	.70 .75	354 24R	-7.7 Jy 29 03	2 , 9	Whelan, Mackrell, Spellman	Wellington, New Zealand	10L, 6L 6L 4L		"	pc, 314	3*	B, G
1180	7/21/69	1930-2145, 2100-2120	Theophilus	26E, 11S	At wall, adjacent to Cyrillus was a reddish glow, then obscur. (Fox). Baum saw intermittent white-blue shimmering as if glowing thru dust glowing & upsurge in brightness on c.p. Gradually faded to normal at 2120. 1st time ever seen by him tho obs. since 1947. Image sharp, no haziness. (indep. confirm. of activity, but details differ, but same time. Apollo 11 watch).	"	"	" " 57 08	2.25 h	7.2	.72 .77	359 25R	-7.3 Jy 29 03	"	Fox, Baum	Newark, Eng. Chester, Eng.	6.5L 4.5R	S=6 T=4	"	"	5*	R, B, G, V
1181	7/22/69	0030 ?, 0115-0125	Proclus	46E, 16N	Brightening of crater (Classen). Alternate brightening of S. part of crater at 15s intervals (too long interval for atm.) while N. half remained constant. Leroy confirmed Cutter. (both confirmed Classen ? Apollo 11 watch).	"	"	" " 57 12	1 h ?	7.4	.73 .78	2 48R	-7.1 Jy 29 03	3-, 15	Classen, Leroy, Cutter	Pulsnitz, E. Ger. Pittsburgh, Pennsylvania	8R 21.5L, 310×		"	"	5*	B, G
1182	7/23/69	0045-0055, 0123-0134	Mare Crisium, Yerkes	53:E, 18N 51E, 13N	Bright area, radial rays in Cris. (nr. Yerkes ?, if so confirm. fr. Chilton & Speck). Chilton, (confirmed by Speck) saw reddening in Yerkes. Phenom. ended at 0134h. It recurred at times thereafter, but never as strong. (Apollo 11 watch).	"	"	" " 58 00	10m 9m	8.4	.76: .81	14 67:R 65R	-6.1 Jy 29 03	3-, 10+	Jean, Chilton, Speck	Montreal, Can. Hamilton, Canada	4R 10L				2, 4*	B, R

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax π_p	π_a	π	Duration	Age	ϕ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ β		m d h	m d h	' "	' "	' "		d	d	°	m d h	K_p, ΣK_p			Ap K Pt.					
				° °				1900 A.D.																
1183	7/23/69	0045- 0055	Moretus	6W, 70S	Saw reddish-yellow & green in it & viol.-purple on term. (chrom. aberr. ?) Moretus was red in yellow filter & had straight black shadows in S. part of crater. Dark shadows on both sides of craters, intermittent. Colors on wall (W.). Also saw a white patch 27°E, 2°N & dark patches at 8°W, 15°N. (Apollo 11 watch).	Je 30 00 Jy 28 09	Jy 13 18	61 26 61 16	53 56	58 00	10 m	8.4	.76 .81	14 8R	-6.1 Jy 29 03	3-, 10+	Jean	Montreal, Canada	4R		LION	314	0	R, V, B, D
1184	7/23/69	1910- 1930	Aristarchus	47W, 23N	Observed a blink (red ?) in crater. (Apollo 11 watch).	"	"	"	"	58 39	1/3 h	9.2	.79: .84	24 -23R	-5.3 Jy 29 03	"	Bartha	Jos'vafo Hungary			"	"	3*	R
1185	7/24/69	0100- 0235	Alphonsus	4W, 13S	Fournier saw obscur. & red in crater. 1 of the dark haloes (NE) was very difficult to detect--seemed to be a whitish mist. Detail best seen in blue & green filters. Dillon found halo much lighter than usual, with usual sharp boundary washed out. Halo was darker thru blue filter, indicating red when it's normally bluish-green. Next nite it was normal. Worsening weather stopped obs. (confirmation. Apollo 11 watch).	"	"	"	"	58 51	1.5 h	9.4	.85	27 23R	-5.0 Jy 29 03	1+, 8- sc-2	Fournier, Dillon	Lowell, Massachusetts	6L, 158×		"	"	5*	R, G
1186	7/25/69	0215- 0300	Aristarchus	47W, 23N	Unusual brightness whole time in center of W. inner slope; rest of crater & Herodotus appeared normal. SW to NW inner slope had pronounced brightness. (Aris. still in dark! Apollo 11 watch).	"	"	"	"	59 48	3/4 h	10.5	.88	39 -8R	-4.0 Jy 29 03	2-, 18- sc-1	daSilva	Rio de Janeiro, Brazil	13R			315	3*	B
1187	7/26/69	0230- 0300	"	"	Crater was gray-bluish, different from any other region & unusually bright. Cardoso saw brightening, used blue, red green & neutral filters. (Apollo 11 watch. daSilva says obs. no good, obs. was inexperienced. However it is similar to many other obs. with much experience).	"	"	"	"	60 29	1/2 h	11.5	.92	51 4R	-3.0 Jy 29 03	6-, 23- sc	Migon, Nosgueira, Cardoso	"	19R 10R 13R			"	2*	V, B
1188	7/27/69	0500- 0700	"	"	Brightening. Filter used. (daSilva says obs. no good, obs. inexperienced. Apollo 11watch).	"	"	"	"	61 03	2 h	12.6	.96	65 18R	-1.9 Jy 29 03	7, 31 ms, sc+1	Cardoso	"	13R			"	0	B
1189	7/27/69	0545- 0546, 0627- 0730	Manilius Menelaus	8E, 15N 16E, 16N	Bright spot in Man. Brightening in Men. (Apollo 11 watch. daSilva says obs. no good because of inexper. of obs.)	"	"	"	"	"	1 m, 1 h	"	"	65 73R 81R	"	"	"	"	", 360×			"	0	B
1190	7/27-/69 28	2300- 0100	Aristarchus	47W, 23N	Brightening in crater. (Apollo 11 watch. daSilva says obs. n.g. because of inexper. of obs.).	"	"	"	"	61 14	2 h	13.4	.99	74 27R	-1.1 Jy 29 03	", 2, 8	de Adeo	"	13R			"	0	B
1191	7/28/69	0100- 0300	"	"	Brightening in crater. (Apollo 11 watch. daSilva says n.g., inexper. obs.).	"	"	"	"	61 15	2 h	"	"	75 28R	-1.0 Jy 29 03	"	"	"	"			"	0	B
1192	7/29/69	0200- 0400	"	"	Brightening. --used several filters. (Apollo 11 watch. daSilva says n.g.).	Jy 28 09 Au 25 15	Au 10 00	61 16 60 40	54 00	61 10	2 h	14.5	.02	87 40R	0.0 Jy 29 03	1, 4-	"	"	"			"	0	B
1193	7/29/69	0600- 0622	Cauchy	38E, 10N	Very bright & clear(?) pulsating 3,3s, 3s with crater illum. then 3s area illum. red & no filter area pulsated for 22m. confirmed by Jackson. (Apollo 11 watch).	"	"	"	"	61 08	1/3 h	14.7	.03	89 127R	0.0 Jy 29 03	"	Pamplona, Barbosa, Jackson	Fortaleza, Brazil "	2R			"	3*	B, G
1194	7/29/69	0700- 0910	Aristarchus	47W, 23N	Brightening in crater. (Apollo11 watch. daSilva says n.g. --inexper.).	"	"	"	"	61 07	2 h	14.8	"	90 43R	"	"	Cardoso	Rio de Janeiro Brazil	13R			"	0	B
1195	8/1/69	0315- 0410	Atlas	45E, 47N	Eng. moon blink in crater at 0336h close to E. wall, NE of central feature. Oval in shape & dirty brownish in color & hazy. Started fading at 0354h but may have been due to dawn. Neg. results on other features. (Apollo 11 watch).	"	"	"	"	59 33	3/4 h	17.5	.17 .14	125 10S	+3.0 Jy 29 03	1, 6-	Pither	Notts, England	12L, 450×	S=G T=G		313 p 76	3*	R, G
1196	8/1/69	0440- 0538	Aristarchus	47W, 23N	Enhanced bright area in SE wall, no pulsation, no color. Usually NW wall is brightest. After 0538h NW region was brightest again. (Apollo 11 watch. indep. confirm. ?).	"	"	"	"	59 34	1 h	"	"	125 101S	"	"	Pamplona, Barbosa, Jackson	Fortaleza, Brazil "	12L, 235× 5L, 100×			315	3*	B
1197	8/2/69	0657- 0710	"	"	Brightening in crater. (Apollo 11 watch).	"	"	"	"	58 42	1/4 h	18.7	.20 .17	139 88S	+4.2 Jy 29 03	2+, 10-	Bartha	Jos' Vafo Hungary				"	1	B
1198	8/9/69	0300- 0403	Herodotus	48W, 22N	Bright pt. on SE wall at 0300h, gone at 0322h. Brightened in blink device (Eng.) at 3:30:50, 3:41:36, 04:03:21.	"	"	"	"	54 03	1 h	25.5	.47 .42	224 4S	+11.0 Jy 29 03	3+, 20	Gomez	Sabadell, Spain	12L, 155, 258, 388×	S=G	SI		3*	B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ , φ		m d h	m d h	π_p π_a π		d	d	°	d m d h	K_p ΣK_p			Ap K Pw					
								1900 A.D.														
1199	8/9/69	0100?	Aristarchus	47W, 23N	Bright spots photog. on E. wall (EWBS) (crater wall seen in ashen light at this time accord. to LION obs.). Pearce, in B.A.A. Circ. 5 (3) says LO 4, fr. 150 shows highlights in similar areas & in Cobra Head & are due to slopes.) Spots were on all 8 negs.	Jy 28 09 Au 25 15	Au 10 00	61 16 60 40 54 00 54 03		25.5	.47: .42:	224: 38	+11.0:	3+,20	Hiscott	England	12L				5*	B
1200	8/26/69	2215-2330	Linné, Plato	12E, 27N 9W, 51N	Small dark spot in oval whitish patch typical under high sun for it. In Plato a diffuse white patch in center flanked by 2 radial diffused bands diverging to S. wall. Later E. band disappeared under better seeing.	Au 25 15 S 22 11	S 06 15	60 40 59 49 54 08 60 26	1.25 h	13.7	.05	80 92R, 71R	-0.5 Au 27 10	5 ,19+ A+2, ms-1	Whippey	Middlesex, England	6L, 177×	S=F+		316	2	D, B
1201	9/16/69 .26?	1900?	Ross	22E, 10N	During ecl., saw brilliant pts. (?) for 30m. (date wrong--age at 16th was 5d, not FM. penumbral ecl. on Sep. 25th 20h UT, Ancill. data given for S 25th).	S 22 11 O 18 04	O 04 09	59 49 59 15 54 14 58 08		14.0	.13	90: 112R	0.0: S 25 20	3+,13 sc+2	Azeau	Paris, France	12L, 100×	S=G alt. 20°		pc	1	B
1202	9/30/69	0446-0510	Aristarchus	47W, 23N	Intermittent blue color on SE wall, verified by others. At 0500h crater resumed normal appear. Became blue again at 0508h, taking 10s to reach max. then slowly disappeared. Gap appeared after 1st event. Drawing.	"	"	" " 55 46	24m	18.4	.32 .30	138 89S	+4.4 S 25 20	8 ,46 ms, sc+1, A+1	Maley, Sauletis	Houston, Texas	16L, 130×	S=G-E T=F	SI	pc	4*	V, G
1203	10/14/69	0000-0030	"	"	Scintillating in irreg. way. Pulses of 1m each time changing with normal & irreg. periods. Best time to see this is 2-3d age. Brightenings comparable to 7.0-7.5 mag. stars, at age 2.2d; 7.6-8.0 mag. at age 3.0, & 8.5-9.0 mag. at 4.2d. Moon obs. from age 1d to 6.2d with several refr. & refl. in program of obs. of scintillation in ashen light. (Atmosperic?).	"	"	" " 58 41:	1/2 h	2.6	.85	307 -100R	-11.4 O 25 09	2-, 5+	Celis, et al.	Valparaiso, Chile		S=G T=G		310, 330	1	B, G
1204	10/16/69	0000-0100	"	"	Brilliant pts. @ 8.5 mag. star. Not seen next nite or the next. --not after 5d age.	"	"	" " 59 04	1 h	4.6	.91	335 -72R	-9.4 O 25 09	2+,10- sc-2	Celis	Quilpué, Chile	3R, 60×	S=VG		330	1	B
1205	10/20/69	1800-1900	Plato	9W, 51N	2 craterlets seen on fl. --never able to see anything on fl. before. W. of these was a dark band, darker than fl. & darkest at N. end. Blink showed no activity here or at Linné, Theoph., or M. Cris.	O 18 04 N 13 02	N 01 06	59 15 59 52 54 13 59 04	1 h	9.3	.09 .09	28 19R	-4.7 O 25 09	2+,10- sc+2	Willet	Dulwich, Lon. England	6L, 192×			318 p115	1	D
1206	11/11-/69 12	2330-0100	Aristarchus	47W, 23N	2 brilliant pts. brighter than 8-9th mag. star. (indep. confirm. ?, Apollo 12 watch).	"	"	" " 59 46	1.5 h	2.1	.97	300 -107R	-12.0 N 24 00	3+,19+, 3+,13 ms ?+1	Celis, Marti	Paso Hondo, Chile	10R, 96×, 4R, 80×, 3R, 60×	S=turb.		330	3*	B
1207	11/12-/69 13	2330-0130	"	"	One obs. saw bluish scintillations in irreg. way. (Apollo 12 watch).	"	"	" " 59 52	2 h	3.1	.99 .00	312 -96R	-11.0 N 24 00	3+,13, 2-,11-	Celis, et al.	Valparaiso, Chile				318	1	V, G
1208	11/14-/69 15	2330-0130	"	"	Blue center & irreg. form, alternating with normal aspects. Some opacity. (indep. confirm. ?, Apollo 12 watch).	N 13 02 D 11 00	N 29 01	59 52 60 47 54 07 59 35	2 h	5.1	.07	336 -71R	-9.0 N 24 00	1+, 3+, 0+, 2	Mitchell, Celis, Marti	Paso Hondo, Chile	3R, 60×, 10R, 96× 4R, 80×	S=E		330	3*	V, G
1209	11/15/69	0220-0320	"	"	Brightenings. (Apollo 12 watch).	"	"	" " 59 33	1 h	"	"	337 -70R	-8.9 N 24 00	0+, 2	Lagunas	Santiago, Chile	10L		LION	319	0	B
1210	11/16/69	1628-1710	Maskelyne	30E, 3N	Brightening & obscur. (Apollo 12 watch).	"	"	" " 58 58	3/4 h	6.8	.12	356 26R	-7.3 N 24 00	2-, 5-	Persson	Hvidore, Denmark	3R		"	319	2	B, G
1211	11/16/69	1643-1922	Aristarchus	47W, 23N	Intermittent pulsations. (atm. ?, Apollo 12 watch)	"	"	" " 58 56	3 h	"	"	357 -50R	"	"	Dall'Ara, Stucchi	Switzerland "	4L? 12L		"	"	3	B, G
1211a	11/17/69	1600-1900, 2135-2138	Menelaus Birt	16E, 16N 9W, 22S	Entire crater of Men. illum. by pale greenish light. (Azevado). Pulsation on W. wall of Birt (daSilva at later time).	N 13 02 D 11 00	N 29 01	59 52 60 47 54 06 58 31		7.8	.16	9 25R, 10 1R	-6.3, -6.1 N 24 00		Azevado, Monguilhott, Fernandes, Leal, daSilva	Paraiba, Brazil " " Brazil	8L 10L		Mo	300 p385	5* 3*	V, B G
1212	11/18/69	0030-0230	several on term. tolimb e.g. Proclus, Censorinus Manilius Menelaus Dionysius	46E, 16N 33E, 1S 8E, 14N 16E, 16N 17E, 3N	At low power, @ 1doz. bright craters glittered like diamonds. Not all bright craters glittered. Glitter appeared at pt. on W. wall crest--like stars. Higher power showed those areas as bright but not star-like pts. nor glittering. (due to geom., power, & area composition ?, e.g. glass ?). Proc., Censor. Dion., Man. & Men. were some that glittered. (Apollo 12 watch).	"	"	" " 58 25	2 h	8.1	.17 .18	12 58-20R 58R 45R 20R 28R 29R	-6.0 N 24 00	2 , 9-	Cameron, Laczo	Greenbelt, Maryland	12L, 80×, 320×				1	B
1213	"	0245-0327	Eratosthenes	11W, 15N	Lights in crater & on wall within the shadows. No color, no variations. (Apollo 12 watch).	"	"	" " 58 22	3/4 h	8.2	"	15 4R	-5.9 N 24 00	"	Bartlett	Baltimore, Maryland	3R, 300×		SI	"	3*	B
1214	"	0422	Aristarchus	47W, 23N	Flash of light, mag 12. (meteor ?, Apollo 12 watch).	"	"	" " 58 18		8.3	"	15 -32R	-5.8 N 24 00	"	Loocks	Valparaiso, Chile	12L		LION	"	1	B
1215	"	1900-1930	Plato	9W, 51N	Obs. shadings in crater at low power, but less apparent at higher power. (less contrast). Not shadows as they were not uniform black. (Apollo 12 watch).	"	"	" " 58 02	1/2 h	8.8	.19 .20	21 12R	-5.3 N 24 00	"	Mackay	Scotland	6L, 40×, 144×		SI	318 p115	1	D

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ , ϕ		m d h	m d h	π_p π_e π		d	π, d	°	d m d h	K_p, ΣK_p			Ap K Pc					
				° '				' " ' " ' "														
								1900A.D.														
1216	11/18/69	2000?	Proclus	46E, 16N	Brightened, exceeded normal. Brightness is monitored relative to Censorinus. (started July, 1969) Obs. thinks all bright craters are variable. (Apollo 12 watch).	N 13 02 D 11 00	N 29 01	FJ 52 60 47 54 07 58 25 57 57		8.8:	.19: .20:	23: 69:R	-5.4: N 24 00	2 , 9-	Classen	Pulsnitz, Czechoslovakia	8R		SI	319	2*	B
1217	"	2110-2111	Copernicus	20W, 9N	Yellowish-red stripe on inner W. wall. (chrom. aberr. ?Apollo 12 watch).	"	"	" " 58 02	1 m	9.0	.20 .21	23 3R	-5.1 N 24 00	"	Hedervari	Budapest, Hungary	3.5R		LION	"	2	R
1218	"	2159	Goldschmidt	4E, 73N	Brightening--photo. (the author, WSC, cannot verify LTP on film. Its brightness similar to other features at same term. dist. Shadow is anomalous if real --very narrow streak beside it & beyond main shadow. Apollo 12 watch).	"	"	" " "		"	"	23 27R	"	"	Brandli	Wald, Switzerland	6L, 90×		SI	", pc	5*	B,D
1219	11/19/69	0330	Alphonsus	4W, 13S	Brightening in W. rim & S. central floor, seen by 2 obs. (Apollo 12 watch).	"	"	" " 57 53		9.3	.22: .23	27 23R	-4.8 N 24 00	3 ,13	Argus/Astronet	California?			LION	319	3*	B
1220	"	1922	Censorinus	33E, 1S	Brightening--photo. (the author, WSC, cannot verify from photo. It is brighter, but so are Proc. & Dionys. --it being between, i.e. Proc. > Censor. > Dionys. Apollo 12 watch).	"	"	" " 57 33		9.9	.23: .24	35 67R	-4.2 N 24 00	"	Brandli	Wald, Switzerland	6L, 90×		SI	", pc	5*	B
1221	"	2115-2200	Piton	1W, 40N	Traces of cloudiness on E. slope at 2115h. Increased at 2150h in extent & brightness. Spread onto plain. Summit & shadow in W. part sharp & clear. (Apollo 12 watch).	"	"	" " 57 32	3.4 h	10.0	.24: .25	36 35R	-4.1 N 24 00	"	Baum	England	4.5R		LION	319	3*	G,B
1222	11/20/69	0527 (UT)?	Alphonsus	4W, 13S	Brightening in crater. (San Diego & Sacramento obs. confirmed, but astronauts did not see anything. Apollo 12 watch).	"	"	" " 57 22		10.8	"	44 40R	-3.8 N 24 00	3-, 8 sc-2	Argus/Astronet	San Diego, Sacramento, California			SI		3*	B
1223	"	1706-1715	Gassendi	40W, 17S	Faint pinkish obscuration on floor. Event in progress at 1706h, gone on return at 1715h. No more LTP from 1734-1822h.	"	"	" " 57 08	10 m	11.3	.27	50 10R	-3.3 N 24 00	"	Duckworth	Manchester, England	8R, 250×			320	4*	R,G
1224	"	1930-1945	"	"	Curious small shadow from NW (ast. ?) wall. (Apollo 12 watch).	"	"	" " 57 05	1/4 h	11.4	.28	51 11R	-3.2 N 24 00	"	Backer	Holland	4R		LION	319	1	D
1225	"	1945-2005	Aristarchus	47W, 23N	Sharp whiteness on inner W. (ast. ?) side. (Apollo 12 watch).	"	"	" " "	1/3 h	"	"	51 4R	"	"	"	"	"		"	"	1	B
1226	11/22/69	1820-2222	"	"	Pulsating patch on W. wall between 2 radial bands. Faded by 2000h. Returned to normal. (Cutts). Miles saw strong pink in whole interior at 2112h. Strong blink. No blink there at 2210-2212h. Gass., Grim., & Plato were neg. Delaye & Jourd an photog. it as very bright. Moore got neg. results at 2135. (confirm. of activity ?, Apollo 12 watch).	"	"	" " 56 03	3 h	12.9	.35	71 24R	-1.2 N 24 00	3+, 18 sc	Cutts, Moore, Miles, Delaye, Jourdran	Chester, Eng. Sussex, Eng. Coventry, Eng. Marseilles, Fr	5.5L 200× 12L, 425× .5R 8L			322	5*	B,G,R
1227	11/27/69	2000?	"	"	Strong pink color in N. part; spectacular Strong blink. Did not notice obscur. Bands were vis.	"	"	" " 54 13		17.9	.47: .53:	132: 95:S	+3.8: N 24 00	4+, 28- ms, sc+1	Miles	Coventry, England	5R, 120×			320, p 6	4*	R
1228	12/11/69	0000-0100	"	"	Noted a diffused foggy patch on which later, blue star-like pts. appeared in very irreg. intervals. Atmosph. was turbulent. Moon set at 0100h.	D 11 00 Ja 08 10	D 26 17	60 47 61 22 54 00 60 47	10 m	1.6	.00 .00	289 -118R	-12.6 D 23 18	4 ,18	(2)Celis, Marti, Oyarzo	Valparaiso, Chile	4R, 80×	S=V turb. alt. low		330	1	G,V
1229	12/12/69	0000-0150	" Herodotus	" 48W, 22N	Star-like pts. on Aris. & Hd rod. but not as brilliant as on Aris. Formed irreg. & doubled for 1-2s duration. (atm. aberr. ?).	"	"	" " 60 38	2 h	2.6	.04	301 -106R	-11.6 D 23 18	3-, 9+	Celis, et al.	Paso Hondo, Santiago, Chile	10R, 90× 3R, 135×	S=V turb. alt. = low		"	0	B
1230	12/23/69	0519-0534	Aristarchus, Cobra Head	47W, 23N 48W, 24N	Strong blink in crater at 0519. All traces gone by 0534h. Could only see in fillers. Plato, Copernicus, Gassendi all normal. Obscur. also in Cob. Head.	"	"	" " 54 33	1/4 h	13.8	.38 .43	80 33R, 32R	-0.5 D 23 18	3 ,20-	Taylor	Bucks?, England	8.5L, 240×			320 p 10	4*	R,G
1231	12/26/69	0335-0345	Aristarchus	47W, 23N	Suspected faint blink & glow outside of SW(IAU ?) wall. Large area was gray toward Herod. Another blink inside between 2 bands at 0330h. At 0345h neither blinks seen. Blink seen in blue(= red event ?). Next nite crater was normal.	"	"	" " 54 02	1/4 h	16.7	.48 .53	116 111S	+2.5 D 23 18	3 ,17-	Kilburn	England	6L, 192×			321	3*	R?
1232	12/28/69	0024	"	"	Blink in same place as # 1231. Very faint & large area.	"	"	" " 54 06		18.6	.55: .60	139 88S	+4.4 D 23 18	2+, 7	"	"	"			"	3*	R?
1233	1/23-/70 25	0700?	"	"	Bluing around crater--vis. in monitor but not photographed due to clouds.	Ja 08 10 F 05 23	Ja 22 20	61 22 61 26 53 57 53 58		15.2:- 17.3:	.52 -.60	96: 49:R- 107:S	+0.8: Ja 22 13	2o, 9: 1-, 2:	Thomas, Rogers, Corr Obs.	Organ Pass New Mexico	24L, MB	thin clouds		392	4*	V

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong., Term. Dist.	Days fr. FM & nn FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ , φ		m d h	m d h	1900A.D.		d	d	°	d m d h	K_p ΣK_p			Ap K Pa					
1234	2/9/70	1743	S. hemisphere		Glimmer of pinkish light (in ashen light) Obs. wondered whether it was some methane gas or trick of light? Obs. at end of twilight. (date given as Feb 4 but must be 9th for time & descrip. ancill. data are for 9th. Chrom. aberr. ?).	F 05 23 Mr 06 10	F 18 22	61 25 60 56 53 59 59 18		3.3	.19 .13	310	-11.7 F 21 08	1 , 5	Colliver	London, England	2 R			331	0	R,G
1235	2/22-/70 24	0700?	Aristarchus	47W, 23N	Bluing around crater--vis. in monitor, but not photographable due to clouds.	"	"	" " 54 29		5.8:- 7.8:	.57:	101: 126:S	+1.0: F 21 08	0 , 1: 3 , 5: sc-1, sc+1	Thomas, Stump, Corral. Obs.	Organ Pass, New Mexico	24L, MB	thin clouds		392	4*	V
1236	3/26/70	1700	nr. Aristarchus, N. of Kepler	47W, 23N 37W, 8N	Pts. N. & S. of crater were brighter by 0.3 & 0.2 mag. respectively than normal--far beyond limits of error. Color index (CI) also showed less depend. on phase (by 0.1-0.2 mag. Did not show reddening dur. enhancement. Polariz. was less by 1-2%. Photog. photom. showed brightening over whole moon. CI N. of Kepler enhanced by 0.5 mag. Resolution = 2.3 km.	Mr 06 10 Ap 03 11	Mr 18 12	60 56 60 06 54 06 56 52		18.9	.73 .72	137 90S	+3.5 Mr 23 02	2 ,10 ms-1 sc-0.3	Sekiguchi, Matsumoto	Tokyo, Japan	36L			327	5*	B,R?
1237	4/11/70	0529	Grimaldi	65W, 5S	Photometric record of relative light level changes. Vis. rept's by others during same time. Pen moved off scale on a 10 mv scale adjusted to 1000mv. Peaks correlate with vis. obs. from Cal. & Ore. bright flashes, 3-5 events. (confirm. Apollo 13 watch).	Ap 03 11 Ap 30 04	Ap 15 06	60 06 59 21 54 13 55 36	1 m	5.0	.29	327 -98R	-10.4 Ap 21 16	3+,15-	Lucas, others	San Diego, California, Oregon	10 L	S=F	SI	pc	5*	B
1238	"	2204-2300	Peirce	53E, 17N	Obscuration over crater. Could not see crater wall. Crater like a black pt. (Apollo 13 watch).	"	"	" " 55 08	1 h	5.7	.31	337 30R	-9.7 Ap 21 16	3+,15-	Pamplona, Jackson	Fortaluza, Brazil	2R 160×	S=F	"	328	1	G D
1239	4/12/70	0015, 0020	nr. Proclus	46E, 16N	Brilliant in area NW of crater. No change in brightness Contrast to opacity of illuminated fraction of this day Later saw a flash on the moon. (Apollo 13 watch).	"	"	" " 55 07	5 m	5.8	.32	343 29R	-9.6 Ap 21 16	2+,12+	Loocks	Valparaiso, Chile	12L 88×		"	"	2	B
1240	"	0025	Theophilus	26E, 11S	Sharp E. inside wall flashes; c.p. lighter than floor. Pink on peak & illum. wall. Drawing. (Apollo 13 watch).	"	"	" " "		"	"	343 9R	"	"	Collier	Montreal, Canada	6L?, 180×		"	pc	2*	B,R
1241	"	2210-2240	Censorinus	33E, 1S	Vis reddish hue--gap in bright area on W. slope. Colorless to pink to reddish. Environs also involved. Photos. (Apollo 13 watch).	"	"	" " 54 40	1/2 h	6.7	.42 .35	348 21R	-8.8 Ap 21 16	"	Nicolini	Sao Paulo, Brazil	12L 680×		"	"	3*	R
1242	"	2346-2352	Cyrillus, Mare Nubium	25E, 13S 5W, 15S	Small crater in W. Cyr was much brighter than anything else in the area. Earlier he got a blink at 35°W, 15°S, 10th mag. Drawing. (Apollo 13 watch).	"	"	" " "	6 m	6.8	.43 .36	349 14R, -46R	-8.7 Ap 21 16	"	Loocks	Valparaiso Chile	12L, 88×		LION	328	1, 2*	B,R
1243	"	2356	Aristarchus	47W 23N	Flash of mag 10. Crater not as brilliant as usual (obscur. ?). Did not obs. permanent luminosity as in other opportunities. (Apollo 13 watch).	"	"	" " 54 39		"	"	349 -58R	"	"	"	"	"		"	"	3*	B,D
1244	4/13/70	0128	Hase	63E, 28S	Intermittent light on S. wall of crater. (atm. ?). (Apollo 13 watch).	"	"	" " "		"	.44 .37	351 54R	"	2 , 7	Dumas	Montreal, Canada			"	"	1	B,G
1245	"	0225-0245	Gemma Frisius Goodacre Goldschmidt Challis (Letronne?)	12E, 34S 13E, 33S 4E, 73N 6E, 75N 33W, 12S	Red color on G. F. & Good. Intermittent red on Gold. & Chall. Pinkish color N. of & on N. wall at 33W, 12S (Letronne ?) (Chrom. aberr. ? Apollo 13 watch).	"	"	" " 54 38	1/3 h	6.9	"	352 4R 5R -4R -2R -41R	-8.6 Ap 21 16	"	Jean	"	4R		"	"	0	R
1246	"	0900-0903	Menelaus	16E, 16N	Deep red cloud seemed to surge upward from outside S. edge of crater wall & disperse around outside edge--spreading out on reaching M. Seren. All clear at 0903h (Apollo 13 watch). Drawing.	"	"	" " 54 32		7.2	.44 .38	355 14R	-8.2 Ap 21 16	"	Whelan	Waitara, New Zealand	10L		"	" pc	3*	R G
1247	"	2206-2211	Piton	2W, 39N	Peak was bright (Apollo 13 watch. Shining in dark ?)	"	"	" " 54 21	5 m	7.7	.44 .39	0 -2R	-7.8 Ap 21 16	"	Cutts	Waverton, England			"	pc	1	B
1248	4/14/70	0045-0130	Ptolemaeus	3W, 12S	A kind of glimmering mist lifted & wafted inside the shady hollow of the crater (Apollo 13 watch).	"	"	" " "	3/4 h	7.8	.45 .40	2 -1R	-7.7 Ap 21 16	1+ 6	Travnik	Mimas, Brazil	4R	S=VG	Mo	"	3*	G
1249	"	0230-0405	Alphonsus Apennines Aristillus M. Vaporum	4W, 13S 10W, 20N 9W, 33N 5E, 15N	Intermittent brightness on c.p. of Alph. Red color on Apenn. N. wall of Aristill. very bright. Dark patch on M. Vap. Intermittent red color on term. (chrom. & atm. aberr ? Apollo 13 watch).	"	"	" " 54 20	1.5 h	7.9	"	3 -1R -7R -6R 8R	-7.6 Ap 21 16	"	Jean	Montreal, Canada	4R		LION	328	1	R,B,G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong., Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	See-ing	Inform Source	App. Ref	Wt.	Phenom. Type
	m d y	h m		λ ° φ °		m d h	m d h	π_p π_a π		d	d	°	m d h	K_p ΣK_p			Ap K Pw					
								1900A.D														
1250	4/14/70	1200-1400	Purbach	3W, 26S	Photos in blue & orange taken. Ill-defined obscur. in blue photo in S. part of crater compared with orange. (neg. is so faint it is doubtful. Apollo 13 watch. Similar to Alter's findings in Alphonsus).	Ap 03 11 Ap 30 04	Ap 15 06	60 06 59 21 54 13 54 16	2 h	8.3	.45 .41	9 6R	-7.1 Ap 21 16	1+ 6	Osawa	Awaji-Shima, Japan	8L, 286×		LION	328	2	V, G
1251	"	2310-2345	Hercules	39 E, 47N	Vis. reddish-brown hue to shaded area in crater--different from Atlas. Phenom. stayed after moving telescope. Photos obtained, Not chrom. aberr. (Apollo 13 watch).	"	"	" " 54 13	1/2 h	8.8	.49 .44	13 52R	-6.7 Ap 21 16	"	Nicolini	Sao Paulo, Brazil	12L 680×		"	"	5*	R
1252	4/15/70	0125-0142	Eratosthenes	11W, 15N	Vis, blink ? on lower c. p. Illum. walls were yellowish-white C. p. diamond brightness with a pt. flashing. Turbulent atm, impeded confirm. Other features normal. (Apollo 13 watch. S-IVB impact at 0109h, took 70s to reach A12 Alsep).	"	"	" " "	1/4 h	8.9	"	14 3R	-6.5 Ap 21 16	3-, 11-	daSilva	Brazil	10L 200× 20R. 224×	S=G T=G	"	"	3	B, R, G
1253	"	0538-0540, 0551-0553	Plato	9W, 51N	At earlier times showed lack of features. At later times the usual most obvious craters were not vis. Obs. reported obs. as neg. Spectra were normal for color. (obs. similar to historic reports. Apollo 13 watch ?).	"	"	" " "	1/4 h	9.0	.50 .45	16 7R	-6.3 Ap 21 16	"	Cross	Las Cruces, New Mexico	4R ?, 710×	S=G, 1.5-0.5 T=5.5 =VG	"	"	1	G
1254	"	2105-2210	Posidonius	29E, 32N	Intermittent pulsation. Drawing. 20S interval for pulsations. (too long for atm. aberr. ?Apollo 13 watch).	"	"	" " 54 15	1 h	9,7	.52 .46	25 54R	-5.7 Ap 21 16	"	Nazareth	Sao Paulo, Brazil	--L		"	"	3*	G
1255	"	2145-2204	nr. & on Plato	9W, 51N	Crater chain W. of Plato--3rd crater W. (Plato Y) was brighter than surroundings. Lozenge on W. wall(landslip ?) was darker than inner wall. Bright part of wall was yellowish-white. daSilva reports this as neg. (normal aspects) obs. (Apollo 13 watch. probably normal as Y is a bright halo crater).	"	"	" " "	1/3 h	"	"	25 16R	"	"	daSilva	"	10R 20R		"	"	0	B, D, R
1256	"	2200-2300	Tycho	11W, 42S	Slightly pulsating white glow on W. (IAU ?) wall's external slope. (Apollo 13 watch).	"	"	" " "	1 h	"	"	25 14R	"	"	Travnik	Mimas, Brazil	4 R		"	"	2	B, G
1257	4/18/70	2014	Aristarchus-Herodotus	48W, 23N	Fairly strong blink in a spot 1/2 way between the 2 craters. Drawing. (Apollo 13 watch).	"	"	" " 54 29		12.6	.62 .57	63 15R	-2.9 Ap 21 16	5+, 22+ sc-2	MacKenzie	England?	2.5R, 45×	S=VG		329	2*	R
1258	5/8/70	2300-2330	Aristarchus region	47W, 23N	Clear line(?) & several star-like pts. (atm. ? low alt. & turbulence ?).	Ap 30 04 My 25 08	My 13 02	59 21 59 35 54 16 55 33	1/2 h	3.4	.35	307 -100R	-12.2 My 21 04		Celis	Quilpué, Chile	3R, 60×	turb.		330	1	B
1259	6/7/70	1915-1945, 2300-2330	"	"	Normal brightening till 1915h when Ar. slowly brightened & stayed till end of obs. Bluish star-like pts. formed intermittently (Celis). Atmosphere not turbulent (confirm. of activity ?).	My 25 08 Je 21 18	Je 09 20	59 35 60 24 54 12 54 31	1/2 h, 1/2 h	3.5, 3.7	.43 .49	311 -96R	-11.7 Je 19 12	4+, 13+	Bartha, Celis; et al	Vituki, Hung. Paso Hondo, Chile	3R, 60× 2.5R; 40×	scint. S=G ?	SI	pc, 330	3*	B, V, G
1260	6/8-/70 9	2330-0000	"	"	Lots of activity--blue luminous star-like pts. in region frequently appearing (atm ?).	"	"	" " 54 15	1/2 h	5.5	.57	335 -72R	-9.5 Je 19 12	2-, 8+ ? sc-1	Celis	Quilpué, Chile	3R, 60×	S=G		"	1	V, B
1261	6/9/70	2315-2330	"	"	Brilliant blue star-like, uninterrupted.	"	"	" " 54 12	1/4 h	6.5	.60	347 -60R	-8.5 Je 19 12	7+, 39 ? sc	"	"	"	S=G		"	2	V
1262	6/19-/70 20	2354-0023	E. of Pythias in M. Imbrium	18:W, 22N	Bright spot nr. Timocharis (on E. Copernican ray ?) decreased slowly for next 8 min. 19sec. At 00:11:05 flared up. After 2nd decreasing, brightened again at 00:25:54 after which no variability. Event was star-like, < 3km. No events on 21st.	"	"	" " 60 02	1/2 h	15.9	.94 .94	100 98S	+0.5 Je 19 12	3, 15- 4-, 26- sc+1	Sendor-Mark	Szolnok, Hungary	4L, 200×	S=F ?	SI	pc	2*	B, G
1263	7/5/70	2245-2315	Aristarchus	47W, 23N	Noted a foggy patch for a short time. Well-defined. Luminous sparkles or gleam with strong intensity & blue color, well-defined.	Je 21 18 Jy 19 22	Jy 07 12	60 24 61 05 54 04 54 12	3/4 h	2,4	.45 .51	295 -112R	-12.8 Jy 18 20	4+, 21+: ms+1	Celis	Paso Hondo, Chile	3R, 60, 100, 135×	S=G		330	2*	G, B V
1264	7/6/70	2245-2345	"	"	Outstanding bright patch(10°bright) electric blue color, every 10s groups of 3 or 4 separate sparkles for 10s then a period of calm for 30s-1m. At 130× was almost constant form. Sometimes the form would be radial like an open hand with extended fingers. (atm. ?) (in dark part).	"	"	" " 54 05	1 h	3.4	.49 .54	307 -100R	-11.8 Jy 18 20	4_o, 19:	"	"	"	S=VG		"	2	V, G, B
1265	7/7/70	2300-2330	"	"	Similar conditions as last nite(#1264) but diminished in brightenings to 40% (to 6° brightness. Real phenom. in the dimming ?).	"	"	" " 54 04	1/2 h	4.4	.52 .58	319 -88R	-10.8 Jy 18 20	2+ 6+:	"	"	"	S=G		"	3*	V, B G, D

No.	Date	UT Time	Feature	Selenograhic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform Source	App. Ref.	Wt	Phenom. Type
	m d y	h m		λ, β		m d h	m d h	π_p π_a π (′ ″) 1900 A D		d	π′ d	°	d, m d h	K_p, ΣK_p			Ap K Pw					
1266	7/ 8/70	2300- 2330	Aristarchus	47W, 23N	Conditions again similar (to # 1264). Brighter tonite(8°) than last nite, but not as bright as on the 6th. Pin pts. of light very accentuated. The radial open hand extended fingers form not so frequently, perhaps because of the larger crescent illum. now.	Je 21 18 Jy 19 22	Jy 07 12	60 24 61 05 54 04 54 13	1/2 h	5.4	.55 .61	332 -77R	-9.8 Jy 18 20	2-, 7+: sc	Celis	Paso Hondo Chile	3R, 60 100, 135×	S=E		330		G, B, V
1267	7/11/70	2035- 2045	Proclus. Secchi	46E, 16N 44E, 3N	Dean saw something in Proclus, alerted Jamieson who saw nothing unusual at 2043h, but tho't Secchi was quite bright. At 2035h Sparks saw Proc. fluctuate. Red & blue filters showed some reduction in brightness. E. edge showed darkening, but not as dark as in shadows. 10 min. later, returned to normal.. (Sparks confirmed Dean).	"	"	" " 55 30	10 m	8.4	.64 .71	0 46R, 44R	-7.0 Jy 18 20	3+, 19- sc+2	Dean, Jamieson, Sparks	Ruislip, --- ---, Eng	6L, 156×			335	5*	B, V, R, G
1268	7/26/70	1500 ?	Aristarchus	47W, 23N?	Polarimetric & photoelectric anomaly on moon.	Jy 19 22 Au 17 07	Au 03 22	61 05 61 24 53 58 57 03:		23.0:	.28: .24:	187: 40:S	+7.8: Jy 18 20	5_o, 20+ sc+1	Sekiguchi	Tokyo, Japan	36L B & V filters			pc, 336	5*	B
1269	8/ 4/70	2250- 2330	"	"	Not so outstanding tonite, but the brilliant patches have their characteristic electric blue color, irreg. form, freq. stable. albedo=8°	"	"	" " 54 01	3/4 h	2.8	.54 .57	301 -106R	-12.1 Au 17 03	2_o, 5:	Celis	Paso Hondo Chile	3R, 60 100, 135×	S=F ?		330	1	V, B
1270	8/ 5/70	2300- 2330	"	"	Same characteristics as last nite, but lower grade intensity. Difficult to see because of small crescent.	"	"	" " 54 11	1/2 h	3.8	.57: .60	314 -93R	-11.1 Au 17 03	2-, 4:	"	"	"	S=G ?		"	1	V, B
1271	8/ 6/70	2300- 2330	"	"	Same characteristics as before (# 1269) but intensity less.	"	"	" " 54 29	1/2 h	4.8	.60: .64	326 -81R	-10.1 Au 17 03	3_o, 13	"	"	"	S=G ?		"	1	V, B
1272	8/13/70	2230	Promontory LaPlace	25W, 46N	Very dark spot at southernmost tip. No other obj. in region gave any shadow. Region must be very high. (spot only 18° from term. so need have slope > 18°. There is an isolated mt. peak that is high just off, but separate from the Promontory. Pickering Atlas, plate 11E & 11B ? shows a dark spot there).	"	"	" " 59 45		11.7	.88	43 18R	-3.2 Au 17 03	3, 13	Beraud	England ?				337	1	D
1273	8/14/70 ?	0500 ?	nr Fra Mauro	15:W, 6:N	Bright blue-white flare. (meteor ?)(call for obs. at Fra Mauro at perigee because of moonquakes there--therefore biased to tidal hypothesis. That was the original location given for the A_1 moonquake site, but is located elsewhere now. Ancill. data given for 1970).	"	"	" " 59 58:	< 1 s	12.0:	.88:	54: 39:R	-2.9: Au 17 03	2, 7+:	Bell	California				pc	1	V, B
1274	8/17/70	0240- 0441	Aristarchus Plato	47W, 23N 9W, 51N	Aris. ceased to be vis. at 0315h as a glowing feature dur. partial ecl. Pamplona saw pulsation in Plato at 0441h. (daSilva says not LTP--inexper. obs.). Thinks it was due to falling temp. At 0240h Pidler noted shadow flowed around instead of over Plato. Wondered if shadow matched gray of crater. Within min. shadow line looked normal again.	"	"	" " 61 24	2 h	14.9	.99	90 43R, 81R	0.0 Au 17 03	9-, 51- sc	Whippey, Pamplona, Pidler	England Brazil England	6L 16×50 binoc			332 p 91	2, 0, 0	D
1275	8/27/70	0235- 0243	Elger	30W, 35S	Brightening in dark beyond term., 3° size, 1.5× size of Elger. Not variable for 5 min. but decreased & became invis. after 0243h. No high peaks there.	Au 17 07 S 14 17	Au 31 01	61 24 61 15 53 57 54 50	8 m	24.9	.34	212 - 2S	+10.0 Au 17 03	3, 21	Merosi	Pecs ?, Hungary	6L, 150×	S=E	SI	pc	3*	B, G
1276	9/13/70	2130	Promontory LaPlace	25W, 46N	Dark black spot nr. it. (if shadow, slope would have to be > 37°).	"	"	" " 61 09		13 0	.97 .97	62 37R	-1.6 S 15 11	5-, 29-	Smith	England	6L, 100×			338	1	D
1277	10/12/70	0054	Proclus	46E, 16N	Floor darkened to intensity 1°.5 (albedo) & c.p. became invis. Next day c.p. reappeared & was 5°bright & 6° on 15th.	S 14 17 O 13 01	S 27 08	61 15 60 38 54 02 60 30		11.4	.96	52 98R	-2.8 O 14 20	5+, 19+ ms ?	Bartlett	Baltimore, Maryland	4L, 51, 281×			339	4*	D
1278	11/ 8/70	0131- 0147	Plato	9W, 51N	Only crater A seen, all others obscur. Floor = 3°albedo, very smooth. A had a minute shadow & no obscur. On Nov. 22, 1966 at nearly same colong. 5 spots, incl. A were vis.	O 13 01 N 09 20	O 24 22	60 38 59 45 54 09 59 30	1/4 h	8 7	.94	22 13R	-5.2 N 13 08	3+, 14+ ms	"	"	3R, 59- 300×	S=5 T=5		340	4*	G
1279	12/ 7-/70 8	2330- 0045	"	"	Floor blank, yet some craters should be vis. Outer wall craters showed clearly. (similar to Bartlett's obs. on Nov. 8th, # 1278).	D 05 06 D 31 10	D 19 15	59 13 59 56 54 13 58 57	1.25 h	9.1	.10	26 17R	-4.8 D 12 21	3+, 15, 5-, 25	Fitton	Oldham England	8.5L, 200×	S=G		341	3*	G

ORIGINAL PAGE IS
OF POOR QUALITY

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref	Wt.	Phenom. Type
	m d y	h m		λ ° , φ °		m d h	m d h	π_p , π_s , π		d	π, d	°	d, m d h	K_p, ΣK_p			Ap K Pw					
								1900A D														
1280	1/1/71	1900-2025	Proclus	46E, 16N	Color patch on N. wall, red & green on inside, even tho eyepieces were rotated & changed, (chrom. aberr. ?)(experienced observer).	D 31 10 Ja 28 10	Ja 16 11	59 56 60 50 54 07 59 45	1.5 h	4.4	.05	306 0 R	-9.7 Ja 11 13	3 .11+	Marchart	Aldershot, England	8R, 500×			342	1	R; V
1281	1/4/71	2029-2037	E.C. Pickering	6E, 3S	Between Saunder & Rhaeticus, apparently coming fr. Pick. After 2037h it diminished with extraordinary swiftness, like a light goes out. (experienced observer).	"	"	" " 58 36	8 m	7.4	.16	5 11R	-6.7 Ja 11 13	4, 25-	Colliver	London, England				"	2*	B
1282	1/10/71	2017-2042	Plato	9W. 51N	Blink(dark gray to black), 13×3km diam on E. wall & floor in indentation in wall. Smaller by 2028 h, gone at 2035h. Reappeared at 2038h & gone completely at 2042h.	"	"	" " 55 45	1/2 h	13.4	.37	72 63R	-0.7 Ja 11 13	3+.11-	Taylor	Slough England	8.5L			"	3*	R, G
1283	2/1/71	1940-2015	nr. Desseilgny in M. Seren.	25E, 25N	Obscur. (blurred & dark) starting between Plinius & Menelaus moving toward Posidonius. Normal after 2 min. A little crater (white spot) periodically disappeared for several secs. regularly every few min. There was haze above only this spot. A tiny crater SE of it was invis. till 2015h then became clear & steady. Color was reddish-brown. Drawing. (Apollo 14 watch).	Ja 28 10 F 25 21	F 13 01	60 50 61 22 54 00 59 27	1/2 h	5.9	.16	350 15R	-8.5 F 10 08	4, 23	Persson	Hvidore, Denmark	2.5R 100×	S=G	LION	pc	3*	R, G
1284*	2/22/71	0247, 1638	Fra Mauro	16W, 5S	2 gas events arrived at Alsep ion detector & a moonquake at about same time as second event. First one was a sharp 4s rise time, 1h decay time, 10× increase in intensity, 2nd event went on for >13h! Molecular wt, was between 14 & 20 Could have been Ne, Fl, O, or H_2O, latter tho't best by Freeman. 2 small seismic events recorded nr. time of 2nd event	"	"	" " 59 14 (2nd ev.)	>13h	26.1, 26.7	.86, .87	231, 238 +35S, +41S	+11.8, +12.4 F 10 08	2+, 7-	Latham, Evans	on moon			news	pc 414	5*	G
1285	2/27/71	2350-0000	Mare Tranquillitatis	40:-45:E, 5:-10:N	In ashen light saw a peculiar white glow too far fr. term, to be sunlit. 9 min. later couldn't be detected, nor any other spots. Spot was 8th or 9th mag. --like galaxies. Checked lens for dirt but was clean. Drawing.	F 25 21 Mr 26 09	Mr 12 04	61 22 61 22 53 58 60 40	10 m	2.6	.08	303 -15:R	-12.1 Mr 12 02	3+ 18+	Dezmelyk	Newton Sq. Pennsylvania	2R, 225, 500×	S=G:		pc	2*	B
1286	3/2/71	2030-2250	Theophilus	26E, 11S	Suspected LTP on c.p. 2 other obs. did not confirm, Orange-pink glow. Faded for 10 min then reappeared.	"	"	" " 58 16	2 h?	5.5	.18 .18	338 4R	-9.2 Mr 12 02	2+, 8	Ringsdore,	Stoneleigh England	15L, 360×	S=G		343	2	R, B, C
1287	3/3/71	2130-2135, 2147	nr. Theophilus S. of Madler	30E, 12S	Reddening in a fan form on bright area of that formation, but red did not extend fully over it. Blink patrol started at 2005h but no red till 2130h. Definite blink at 2147h.	"	"	" " 57 20	5 m ?	6.4	.21	356 26R	-8.3 Mr 12 02	4-, 17+	Hedley-Robinson	England	3.75R, 164×	S=G steady haze		", 344	3*	R
1288	3/8/71	2300-2310	Aristarchus area	49W, 23N	Suspicion of white spot W. of N-S radial band, slightly brighter than wall. Diam. @ 5-6km. Area affected by temp. ?Term. passed over it just 5 h before. Gradual decline in brightness over the 10 m period.	"	"	" " 54 25	10 m	11.6	.38 .39	52 2.5R	-3.1 Mr 12 02	4, 23+ ms?	Lyttle	N. Ireland	6L, 98×	S=2-1		344	1	B
1289	3/15/71	0207-0315	Macrobius	45E, 22N	Strong pink color extending whole curve of craters's illum. wall, starting & ending in shadow side. Color grew deeper, then faded & ended at 0315h. Changed eyepieces. No other feature had this tho looked for. Survived many separate powers of eyepieces.	"	"	" " 54 21	1 h	17.7	.61 .60	124 11S	+3.0 Mr 12 02	5, 27 ms?	Sparks	Exmouth, England	6L, 400×			"	2*	R
1290*	3/20/71		Fra Mauro	16W, 6S	Gas detected by Alsep instrument. 19 min rise time, 100× increase. (one lunation after 1st event. Prelim. & tentative data)	"	"	" " 57 04		23:	.78	190: 10:S	+8.0 Mr 12 02	4, 19	Evans	on moon				pc 414	5* ?	G
1291	4/13/71	0330-0430	Plato	9W, 51N	Spectrum obtained showed an extra absorption line at 4908±4A & possibly another. No other of 6 spectra of other features on the plate show it. No other of 20 spectra of Plato, including another on the same nite, show it. Further reductionc & analysis remain to be done.	Mr 26 09 Ap 23 18	Ap 08 08	61 22 60 52 54 00 55 02		17.3	.63	121 68S	+2.5 Ap 1020	3-, 16 sc-1	Cameron	Greenbelt Maryland	36L, 6-in. grating	S=G			5*	D, G?

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ° φ °		m d h	m d h	π_p ' " π_a ' " π ' " 1900A D		d	π/d	°	d, m d h	K_p, ΣK_p			Ap K Pa					
1292	4/30-/71 5/1/71	2130-2400	Klein (in Albategnius)	3E, 12S	Attention distracted from Ptolemaeus to Klein where floor was not normal. It had a pink line at foot of inner N. wall which was bright in sunlight. Pink extended from N. to W. pt. Floor in NW quad. was reddish-brown. All similarly illum. craters were examined & no trace. Klein shifted to all parts of lens but color persisted, but could not be induced in other craters. At 2230h floor took on more color in NW. In filters floor detail vis. in red, almost invis. in blue, c.p. barely vis. Color bright in red, & black in blue filter. In white light looked like atm. above surface. Ptol. was equal in red & blue, & also other craters. (date in ref. gives Apr. 30, Moore gives Apr. 31! Ap 30 wrong as feature not illum. on that date, not even illum. on 5/2/71!).	Ap 23 18 My 21 17	My 05 21	60 52 60 04 54 06 55 58	2.5 h	5.8	.26	338 -19R	-10.5 My 10 11	3-,13+	Fitton	England	8L 200× filters			345	4*	R,G
1293	5/1/71	2100-2150	Maurolycus	12E, 40S	Colored, luminous projection from crater into & thru small crater on N. rim. Color of a dark candlelight then red. Length @ diam. of small crater. Drawing.	"	"	" " 55 20	50m	6.6	.29	348 0R	-8.7 My 10 11	"	Staedke, Jorgensen	Berlin, Germany	, 40× filters		SI	pc	2	R, B
1294	5/4/71	1920	Manilius	8E, 15N	Distinct pink color.	"	"	" " 54 10		9.6	.40	25 33R	-5.7 My 10 11	4-,12+	Mansfield	Cape Town, S Africa			Mo	300	3*	R
1295	6/13/71	0722-0805	Gassendi	40W, 16S	At 0755 variation on W. (IAU ?) edge of crater "brightness seemed to become a little darker" as it was fugacious (foggy ?), Was not sure it was a LTP. Other features & it were normal from 0658-0755h.	My 21 17 Je 17 10	Je 02 14	60 04 59 22 54 14 58 40		19.8	.85 .85	148 72S	+ 4.3 Je 09 00	4-,13+	daSilva	Paranaiba, Brazil	9.5L, 90, 180×	S=G		pc	1	D,G
1296	6/13/71	0821	Aristarchus	47W, 23N	S. part of floor was brownish & granulated.	"	"	" " "		"	"	148 79S	"	"	Bartlett	Baltimore Maryland	4L, 51 93 125×			pc	4	R
1297	6/16/71	0708-0709	Straight Wall	8W, 23S	Surroundings were darker than obs. 2 days earlier. At 0709 tonality became clearer. As dawn was in progress & atm. turb., not sure if LTP. Other features were normal.	"	"	" " 59 18	1 m	22.8	.96	184 4S	+7.3 Je 09 00	2+,12-	daSilva	Paranaiba, Brazil	9 5L 90×	S=G		"	0	D
1298	6/18/71	0212-0231	Grimaldi	66W, 5S	Dark reddish spot in SW part of crater At 60×. Became clearer at 200× & seen in midwest also. At 0331h phenom. clearest in west, while S. region had faded, Air turb. & dawn ended obs. at 0331h. Seen best in yellow filter, well in red, invis. in green & blue.	Je 17 10 Jy 12 15	Je 30 09	59 22 59 36 54 15 59 20	1/3 h	24.6	.03 .03	205 41S	+9.1 Je 09 00	3 ,13-	Jorgensen	Denmark	36R 60 200× filters	S=G		346	3*	R
1299	7/5/71	0348	Herodotus	48W, 22N	Pseudo-c.p., I=4°(albedo) appeared to cast a distinct shadow. 1st time seen. Craterlet nr. it could have emitted gas that cast a shadow. (Apollo 15 photo shows an apparent slight elev. nr. center--very very low hills ? slope would need be <10° to cast a shadow--normal appear ?).	"	"	" " 54 43		12.2	.69 .70	55 6R	-3.3 Jy 08 10	3-.14+	Bartlett	Baltimore, Maryland	5L 79-283×	S=5-4 T=5		"	1	B,G
1300	7/26/71	2140-2205	Aristarchus	47W, 23N	2 brilliant pts. in crater, right one more brilliant than left one. He says not an LTP, but it is similar to other rept's. (Apollo 15 watch).	Jy 12 15 Au 09 01	Jy 28 03	59 36 60 25 54 10 54 17	1/2 h	4.5	.46 .52	320 -87R	-10.9 Au 06 20	6-,17- ms ?	daSilva	Paranaiba, Brazil	13R, 224×	S=G T=F		pc	1	B
1301	7/27/71	1830	Beaumont	29E. 17S	Curious brilliance in its interior suspected of change (Apollo 15 watch ?).	"	"	" " 54 11		5.3	.55	331 0 R	-10.1 Au 06 20	3+,17-	Miranda	Piaui, Brazil	4 R	70° alt.		"	2	B,G
1302	7/31/71	1840	Peak N. of Mt. Hadley	5E, 27N	Intermittent & curious brilliance on top of peak with irreg. reflection (Apollo 15 watch ?).	"	"	" " 55 17		9.3	.70	18 23R	-6.1 Au 06 20	4-,17	"	"	" 80, 160×	"		"	2	B,G
1303	8/1/71	1900	Archimedes	5W, 29N	2 grooves seen going from E to W; broadening toward W. Drawing. First time ever seen. (rays ?). Similar phenom. reported before in nearly same position. (Apollo 15 watch ?).	"	"	" " 55 56		10.3	.73	30 25R	-5.1 Au 06 20	2+,12	"	"	4 R, 80×			"	2	
1304	8/6/71	0345	Aristarchus	47W, 23N	Color photo. showing crater very bright comp. with all other features. Says glare at Aris. (seen vis. ? Apollo 15 watch ? Date typed 06-08-71, European format ? if date = June 8, aux. data are same except solar = 3-,14+ & dates & times of Perigee, apogee, & FM differ).	"	"	" " 59 24		14.7	.90	83 36R	-0.6 Au 06 20	1+, 3+ sc-1	Travnik	Mimas, Brazil	6 R			"	5*	B

No	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong, Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ° φ °		m d h	m d h	πp ′ ″ πa ′ ″ π ′ ″		d	d	°	m d h	Kp, ΣKp			Ap K Pw					
								1900A.D.														
1305	8/6/71	2030	Riccioli	76W, 3S	Dark spot was very dark for 3 min. before coming out of shadow, but dimensions were normal. (lunar ecl.).	Jy 12 15 Au 09 01	Jy 28 03	59 36 60 25 54 10 59 50		15.4	.91	91 15R	0.0 Au 06 20	1+, 3+	Chernov	Crimea?, Russia			F,C	387	2	D
1306	8/6/71	2100:	Atlas	44E, 47N	2 large spots were not vis. in the penumbra after totality, brighter than nor. ?)	"	"	" " ":		"	"	91 135R	"	"	"	"			"	"	2	B
1307	8/29/71	0034	Proclus	46E, 16N	C.p. appeared as white, 5° albedo. Obj on 3° floor had a distinct olive tint. C.p. was distinct tho transparency was low.	Au 09 01 S 06 05	Au 24 20	60 25 61 08 54 02 55 20		8.0	.71	5 51R	-7.2 S 05 04	3-,12	Bartlett	Baltimore. Maryland	5L,79- 283×	S=5 T=2.5		343 pc	3	B,V
1308	8/30/71	0035	"	"	C.p. very dull, grayish, 4-°albedo. Floor much darker =2.5°, still showing olive tint.	"	"	" " 56 13		9.0	.74	17 63R	-6.2 S 05 04	3, 12-	"	"	"	S=7 T=3		pc	3*	D V
1309	8/31/71	0114	"	"	C.p. completely invis. Floor now 2° & blackish. Other obj. on floor seen easily. C.p's in Peirce & Picard were vis. & est. 4°, ;, difficult. (Proc. c.p. 2.5 steps below normal in albedo).	"	"	" " 56 55		10.0	.78	30 76R	-5.2 S 05 04	5 ,33	"	"	"	S=5 T=3		"	3*	D
1310	9/1/71	2045- 2105	Aristarchus	47W. 23N	Saw a bright glow, especially in E. wall. (Confirm. but not indep. ?).	"	"	" " 58 36	1/3 h	11.8	.82 .84	51 4R	-3.4 S 05 04	4-,19 ms, sc+1	Neville, Cunnington	Nottingham England	4L,180×	alt low			3*	B
1311	9/2/71	2000?	", Herodotus	", 48W, 22N	Brownish-red or maroon seen on Aris. W. wall, ridge to Herod., on S. wall of Herodotus.	"	"	" " 59 31:		12.8:	.88:	63: 17:R 16:R	-2.4: S 05 04	1-, 2+ ms+1	Azeau	Paris, France	12L,100×			"	2	R
1312	9/3/71	2000?	"	"	Maroon color covering the ridge(?) E. (ast. ?) & the ridge(?) S. of Herod. in 3 or 5 secs. Cloud disappeared after 10 min.	"	"	" " 60 16:	10 m	13.8	.91:	75: 28:R, 27:R	-1.4: S 05 04	2+,11- sc-1	"	"	"			"	3*	R,G
1313	9/4/71	0430	Proclus	46E, 16N	C.p. vis. but just barely; very dull & gray, 3° albedo vs. 1° albedo floor. (normal c.p. albedo = 5°at this colong. So c.p. 2 full steps below normal & floor was 0.3° lower.).	"	"	" " 60 30		14.2	.93	80 126R	-1.0 S 05 04	4+,12 sc	Bartlett	Baltimore Maryland	4.5L,51, 93,125, 281×	S=4 T=4		"	3*	D
1314	9/5/71	0435	"	"	C.p. bright 5° albedo, very easy to see. (normal ?). Floor was blackish, 1°albedo.	"	"	" " 60 58		15.2	.96	92 42S	0.0 S 05 04	3+,23+ ms, sc+1	"	"	"	S=4-3 T=5		"	0	B
1315	9/6/71	0555.	"	"	C.p. again very dull, barely vis., albedo =3.5, floor =3. Floor had a dark olive tint. C.p.'s in Peirce & Picard tho dull 4° were seen more easily.	S 06 05 O 04 15	S 21 06	61 08 61 28 53 56 61 07		16.2	.00 .00	105 29S	+1.0 S 05 04	4-,19 ms:sc+2	"	"	"	S=6-3 T=5		"	4*	D,V
1316	9/7/71	0240	"	"	C.p. again white, 5°, easily vis. against 3°floor. Proc. C abnormally large (spot on fl. nr. SW wall).	"	"	" " 61 00		17.1	.02 .03	116 18S	+1.9 S 05 04	4+,27- ms?	"	"	5L,79, 142,194, 283×	S=5 T=5		"	2	B
1317	9/8/71	0225	"	"	C.p. vis. in full floor shadow as a dull grayish spot of albedo 4. Proc. C vis. in fl. shad. as a 5°bright spot. Not as large as last nite. (normally not vis. at this col.).	"	"	" " 60 36		18.1	.04 .07	128 6S	+2.9 S 05 04	4-,20- ms+1?	"	"	"	S=5 T=4		"	4*	B
1318	11/1/71	1935- 2035	Plato	9W, 51N	NW (IAU?) rim, small area of obscur. & a bright spot adjacent to it. Was normal at 2035h. Kirsop confirmed. Fitton saw nothing unusual in blink patrol. (blink device detects color rather than brightness).	O 04 15 N 02 02	O 18 08	61 28 61 17 53 56 61 16	1 h	13.6	.99	77 68R	-1.1 N 02 21	3-,11+	Kidd, Kirsop, Fitton	S Shields, England Lancashire,	Eng 16L Eng 8L,200×	S=G		348	4*	G B
1319	11/3/71	2000?	Kastner	85E, 6S	Red (carmine) glimmer. Several craters tinged with red Drawing. (low-angle illum. reddening or chrom. aberr. ?).	N 02 02 N 30 11	N 14 15	61 17 60 36 54 00 60 48	hrs.	15.5:	.06:	94: 4:S	+1.0 N 02 21	1 , 5+	Azeau	Paris, France	12L,100×			pc	0	R
1320	12/6/71	2135- 2320	Theophilus	26E, 11S	Red-orange patch on E. (IAU?) floor even without a blink. Others confirmed. Dimmed by 2150h but still seen. Dimmer yet at 2230h & gone at 2300h. Baum saw brownish-red patch at 25.5°E, 12.5°S. Taylor saw reddish patch SE of crater, fainter at 2220h, gone at 2300h. Fitton saw image very dull, yellow & steady. Filters showed nothing unusual, & nothing seen at 2320h.	N 30 11 D 28 05	D 12 07	60 36 59 40 54 08 56 32	1.5 h	18.7	.30 .33	130 24S	+4.6 D 02 08	2-, 5	Findlay, Ford, Taylor, Robbie, Bolger, Fitton	Dundee, Scot " Chester, Eng Lancashire, Eng	10R,180× ? 8L	alt. low		349, 348	5*	R,G
1321	1/26/72	1825- 1855	Plato Plato A	9W, 51N 14W, 52N	Misty patch over A, & a misty brightness over SW wall of Plato. (?). Hunt saw nothing unusual.	Ja 22 05 F 17 19	F 06 01	59 16 60 03 54 12 58 31	1/2 h	10.2	15 17	39 25R, 30R	-3.8 Ja 30 11	3 ,14	Watkins, Hunt	England	4.5L,150 225× 2.75R			351, 352	2*	G
1322	2/23/72	0010-	Piton	1W, 41N	Shading usually vis. W. of it was not seen. (albedo must have been @ 5, where normally is 4.5, & nearby plain is 5).	F 17 19 Mr 16 21	Mr 04 19	60 03 60 54 54 06 58 15	1/2 h	8.0	21 19	12 11R	-6.1 F 29 03	5-,25+ sc-1	Fornarucci	Garfield, New Jersey	6L,250×	S=F T=3.5		pc	2*	B,G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	Φ	Colong. Term Dist	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ °, β °		m d h	m d h	π_p ′ ″ π_a ′ ″ π ′ ″ 1900 A.D.		d	π, d	°	d, m d h	Kp, ΣKp			Ap K Pw					
1323	2/24/72	1930- 2000	S. of Copernicus	20W, 8:N	White spot just S. of Cop. about same size as Copernicus H (@ 5km). (there is a bright area or mt. SW of Cop. H).	F 17 19 Mr 16 21	Mr 04 19	60 03 60 54 54 06 57 21	1/2 h	9.8	.24 .25	34 14R	-4.3 F 29 03	5+,33 sc	McConnell	England	6L, 195×	S=G		352	1	B
1324	2/27/72	2000- 2020, 2240	Gassendi	40W, 16S	Suspicion of blink between Gass. c.p. & Gass. A. Clouds prevented confirm. Hedley-Robinson didn't see anything unusual earlier (2000-2020h).	"	"	" " 55 49		12.8, 12.9	.33 .36	70, 71 31R	-1.2 F 29 03	3-, 9-	Kemp, Hedley-Robinson	Cheshire, Eng. Devon, Eng.	8.5L, 286× 12L			"	1	R
1325	3/18/72	1906- 2100	Mare Crisium	62E, 11N, 48E, 14N	At 1906h Pruvost rep'ted 2 pts. moving from Azout to Prom. Olivium. Minutes later, Dorchain saw a new pt. Others saw nothing unusual fr. 1912-2100h. (this time is later than event).	Mr 16 21 Ap 14 06	Ap 01 07	60 54 61 22 54 00 60 22	min.	3.3	.09 .07	314 16-2R	-11.0 Mr 29 20	4 ,17+	Pruvost, Dorchain, Fitton, Ash, Peters, Watkins, et al.	Belgium, " England, " "	3.5L, 168, 336×, 8L, 8L, 8L, 8L			"	2	B
1326	3/19/72	0238- 0300	S. pole term., Cepheus	43E, 90S 45E, 40N	At 0248h red color at S. pole terminator. At 0252h Ceph. had red color on its floor, intermittently along term. (chrom. aberr. ?). Fracastorius & Piccolomini were normal.	"	"	" " 60 15	1/2 h	3.6	.10 .08	317 0R, 2R	-10.7 Mr 29 20	2 ,10-	Jean	Montreal, Canada	4R, 350×			"	0	R,G
1327	3/22/72	1950- 2155	Proclus	46E, 16N	At 1950h noted c.p. was invis. under all magnifications. At 2050h saw minute star-like flash @ 0.5s duration, followed by another 10s later, & another one 10s after that. Occurred on N. crater floor. Proc. C was vis. Was using blink device. Beddoe saw nothing unusual from 1850-1900h (prior to event). Moore, alerted, saw nothing unusual from 2100h on. (after flash. c.p. variation similar to rep'ts by Bartlett, e.g. # 1309).	"	"	" " 57 37	1 h	7.3	.25 .21	3 49R	-7.0 Mr 29 20	3 ,17	Jewitt, Beddoes, Moore	Middlesex, Eng. England, Selsey, Eng.	6L, 150× 12.5L, 250 460×	S=7, T=4 S=E, S=F		"	2*	D,G,B
1328	4/17/72	2010- 2045	", Macrobius	", 45E, 21N	Macrob. was a white ring without outline or shadow. (shad. should have been seen--sun only up 5° alt. . Something was raising albedo from 0 to surround.). Proc. not as clear as usual.	Ap 14 06 My 12 17	Ap 28 10	61 22 61 20 53 57 59 35	1/2 h	3.9	.17 .12	320 5R, 6R	-10.7 Ap 28 13	3-,12+	Persson	Hvidore, Denmark	2.5R, 58, 100×	S=G		pc	3*	B,G
1329	4/17/72	"	Gutenberg	43E, 9S	Pale spot on floor of dark yellow color. No changes. Obs. does not call it an LTP. (color is abnormal, chrom. aberr. ?).	"	"	" " "	"	"	"	320 3R	"	"	"	"	"	"		"	1	R
1330	4/17/72	"	W. limb fr. Hercynian mts. to Cleostratus	85:W, 25N 80W, 60N	Noted a brightening of dark limb between these 2 features. Tho't due to atm. disturbance. (similar to other rep'ts, e.g. # 1156).	"	"	" " "	"	"	"	320 120R	"	"	"	"	"	"		"	1	B
1331*	4/21/72	123.07GET =1901UT	farside	180:E	Commander pilot on Apollo 16 noted a bright flash from below his horizon. (pilot was dark adapted, & no seismic event, so probably not a meteor; could have been a cosmic ray flash in his eye).	"	"	" " 56 29		7.5	.32 .25	177E 3:S	-7.1 Ap 28 13	5-,25- ms, sc+1.6	Mattingly	orbiting moon on farside	naked eye	S=10		353	3*	B
1332	5/16/72	2200- 2230	N. rim of Mare Crisium	53E, 23N	Changes in brightness. Spot looked dimmer than spot just inside N. rim. Earlier drawings noted it as bright, but dimmer tonite. Others saw nothing unusual. Mare normal.	My 12 17 Je 10 00	My 25 15	61 20 60 50 54 00 58 54	1/2 h	3.7	.20 .15	315 8R	-11.3 My 28 04	6 ,20+ ms, sc+1	Kemp	Cheshire, England	8.5L, 143, 286×	S=F		354	2	D
1333	5/18/72	2050- 2145, 2215- 2300	Burg	27E, 46N	Suspected floor brightening at 2050h with a luminous strip to the SW. Persisted for sometime. Faded at 2110h & invis. at 2145h. Fitton from 2215-2300h saw nothing unusual. (after event tho).	"	"	" " 57 03	1 h, 3/4 h	5.6	.28 .22	338 5R	-9.3 My 28 04	3+,17-	Moore, Fitton	Selsey, Eng. Lancashire, Eng.	12.5L, 360× 8.5L, 200×	S=3-4		"	3*	B
1334	5/22/72	2100- 2320	N. rim of Mare Crisium	53E, 23N	Change in brightness--dimming. He wondered if due to poor seeing. Rest of mare normal	"	"	" " 54 26	2.3 h	9.6	.36	28 81R	-5.3 My 28 04	2+,11	Kemp	Cheshire, England	8.5L, 143, 286×	S=P		"	0	D
1335	5/24/72	2100- 2130	"	"	Spot distinctly dimmer or weaker. Rest of mare normal.	"	"	" " 54 02	1/2 h	11.6	.43	51 104R	-3.3 My 28 04	2+, 9	"	"	"			"	2	D
1336	6/19/72	2140- 2230	Plato	9W, 51N	Noted a bright area in the center. Moore noted nothing unusual & he tho't obs. saw one of permanent light patches.	Je 10 00 Jy 07 23	Je 22 03	60 50 60 04 54 06 54 29	1 h	8.4	.43 .35	10 1R	-6.9 Je 26 19	5 ,23+ ms, sc+2	Jones, Moore	England Selsey, Eng.	12L, 150, 450×, 12.5L			355	0	B
1337	7/29/72	0030- 0330	Alphonsus	4W, 13S	Orange spot just W. of c.p. on central ridge; circular area @ 15-25km diam. larger than c.p. Was bright orange then turned orange-brown toward center. Central 4.5km was darker than rest; brownish-black with blue-white specks flashing in center. Obscur. there but ridge clear elsewhere. The dark spot SW of c.p. could not be seen tho outside of color area. Sketch. It had appearance of dome of atm. thicker at center. Never seen before in 11 y. Next nite brighter.	Jy 07 23 Au 03 15	Jy 19 20	60 04 59 22 54 13 58 06	3 h	18.2	.83 .79	128 56S	+2.7 Jy 26 08	1+, 7	Morgan	England	--R	S=E		pc	3*	R,G

ORIGINAL PAGE IS OF POOR QUALITY

C-2

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong, Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ° φ °		m d h	m d h	1900 A.D.		d	d	°	d, m d h	K_p, ΣK_p			Ap K Pw					
1338	7/30/72	0030-0330	Alphonsus	4W, 13S	Orange glow, brighter this nite than last nite. Following nites were cloudy. Aristarchus & Gassendi were negative.	Jy 07 23 Au 03 15	 Jy 19 20	60 04 59 22 54 13 58 30	3 h	19.2	.86 .83	140 44S	+3.7 Jy 26 08	2 , 8	Morgan	England	--R,	S=E		pc	3*	R,B
1339	8/2/72	2342	Grimaldi	65W, 5S	Blink in crater, slight but definite on W. wall. Appeared bright without filters. Confirmed by Findlay & Ford. Aris., Gass. & Prom. Heraclides were normal.	"	"	" " 59 21		23.2	.98 .98	188 56S	+7.7 Jy 26 08	2+,10+ ms-2	Taylor, Findlay, Ford	Dundee, Scot. "	10R, 180× filters			356	5*	R
1340	8/15/72	2200	Peirce A & crater N. of it	54E, 17N 54E, 19N	Peirce A (or B ?) was sharply defined & easily seen & a still smaller crater as far N. of it as it is from Peirce was very conspicuous. (Orbiter pics show nothing to account for it). It disappeared next nite, whereas Peirce A was still easily visible.	Au 03 15 Au 28 20	Au 16 15	59 22 59 37 54 15 54 17		6.7	.49	348 42R	-8.8 Au 24 18	4 ,18-	Baftlett	Baltimore, Maryland	3R, 54-300×	S=F-G		"	3*	B,D?
1341	8/16/72	2200:	N. of Peirce A (or B ?)	54:E, 19N	Craterlet not vis. but Peirce A (B ?) was. It is normally invis. at this phase (if Peirce A had shadow, its slopes are > 53°!; a darkening here instead ?Not seen in Pickering Atlas at 47° colong.)	"	"	" " 54 15		7.7	.50 .50	359 53R	-7.8 Au 24 18	2+,12	"	"	"	S=G T=G		"	3*	D?
1342	8/27/72	0851-0921	Messier, Messier A	46E, 3S 45E, 3S	Peculiar thread of shadow connecting the 2 craters. Sun's elev. @ 6°. Drawing. (possibly a high peak on E. wall of A casting a shadow ?).	"	"	" " 59 27	1/2 h	18.1	.90 .94	126 8S, 9S	+2.6 Au 24 18	5+,27+ ms,sc+1	Hanson	LeMoore, California	6L, 200×			357	1	D
1343	9/16/72	0015-0030	Piton & vicinity	2W, 39N	Noted an unusual double shadow for the peak. The 2nd, anomalous shad. ran SE fr. the peak. (this direction coincides with a ridge as found by Vaucher from Wessling's drawing of 10/27/71, when col. =4.7° in a 12-in refl. at 450×, S=2-4, T=2-3 at 0024-0100h. This means the ridge has a slope > 6.5°).	Au 28 20 S 25 07	S 13 10	59 37 60 28 54 09 54 43	1/4 h	8.3	.66	6 4R	-7.2 S 23 04	4+,26+ ms ?	Fornarucci	Garfield, New Jersey	6L, 175×	S=3=P T=4		" p118	0	D
1344	9/20 ?/72	1945-2025, 2000-2330	Schickard	55W, 45S	Luminous, nebulous spot attracted Watkin's att'n. Got brighter. Checked 'scope--not instru. Obj. had greenish-gray color, size @ 15km. Amery & Fitton with blink devices noted nothing unusual at later times (2000-2330h). Aris., Plato, Gass. were neg. at 1930-2025h. (date not given, guessed at fr. available info.). Turbulence, lasting secs. at a time.	"	"	" " 58 15	1.5 h, 3.5 h	13.1:	.81: .84:	65: 10:R	-2.4: S 23 04	2 , 7+:	Watkins, Amery, Fitton, Moore	Herts, Eng. Reading, Eng. Lancashire, Eng. Selsey, Eng.	4.5L, 225× 12L ? 8.5L 12. 5L ?, 4. 5R, 45-225×	S=G S=P		358	2*	B, V, G
1345	9/25/72	2320-2345	Birt	9W, 22S	All bright areas were similar in intensity (albedo) but 2 larger ones at times seemed brighter, N & S. The E. (IAU ?) wall of the small craterlet showed most prominently & at times suspected a faint pt. of light just W. of its center. This was very suspect, however.	S 25 07 O 23 12	O 11 03	60 28 61 12 54 01 60 24	1/2 h	18.3	.02	128 61S	+2.8 S 23 04	2+,12+	Doherty	Stroke-on-Trent, England	10L, 280×	S=VG		359	1	B
1346	10/19/72	1755-1805	Aristarchus	47W, 23N	At 1755h noted bluish-purple color area just N. of Aris. & it reached just over N. wall, lasted 2 min. At 1800h color noted again, but not as brilliant & gone at 1801h. Seen again at 1804h & now was on E. (ast. ?) wall, lasting <1 min. Sure of its reality but not of lunar origin. All gone at 1805h. Hitchens noted a very bright spot on W. (IAU ?) wall between 2 prominent bands. Blue darkening in W# 38 filter, neg in W# 8, 25, 58 & integrated light. Other areas gave similar but lesser effects. May be due to damp gelatin. (Moore thinks not LTP but many obs. have rep't. blue at Aris.). Others obs. later (2100, 2215-2300, 2305h) & noted nothing unusual.	"	"	" " 59 11	10 m	12.3	.88 .86	56 9R	-2.8 O 22 14	6-,33 ms,sc+1	Gabriel, Hitchens, Peters, Amery, Flynn	Wetteren, Belg. Stamine Locks, Kent, Eng. Reading, Eng. England	4R, 166× 8.5L 10L 10L ? 12L	S=E- S=F-		358	2	V
1347	10/19/72	2010	Plato	9W, 51N	Taylor noted a slight blink on NW wall. Ford said it was neg. Phillips was not sure. Taylor retur ned to telescope & no blink. Kennedy reported neg.	"	"	" " "		"	"	57 49R	-2.7 O 22 14	"	Taylor, Phillips, Ford, Kennedy	Dundee, Scot. "	10R			"	1	R
1348	10/23/72	2210	Between M. Anguis & M. Crisium	70:E, 23N	Observed red, orange, yellow arching upward & outward on either side of hills. Widths of colors were 6:2:1 of R, O, Y respectively--in keeping with a spectrum. Thinks that's what it was.	O 23 12 N 21 00	N 07 13	61 12 61 30 53 56 61 10		16.6	.01	108 2S	+1.4 O 22 14	4-,26+ ms ?	Daw	England				360	1	R

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term. Dist.	Days fr. FM & d.	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref	Wt.	Phenom. Type
	m d y	h m		λ , φ		m d h	m d h	π_p π_a π		d	W, d	°	m d h	$K_p, \Sigma K_p$			Ap K Pw					
								1900A.D														
1349	11/10/72	2343	Lyell	41E, 14N	At apparent center of floor & edge of morning shadow an elongated, N-S irreg. obj. dull whitish-gray, albedo=4 like a c.p. (photo in Kwasan atlas in 1963 taken at col. 339.3° has a faint suggestion of a bright spot in that place-(plate 20) LO IV66 H_2 & 73 H_2, sun elev. @ 20° show an even, dark floor with a very small crater right in center--unresolvable at earth. Kwasan photo's spot could be an artifact).	O 23 12 N 21 00	N 07 13	61 12 61 30 53 56 54 35		4.9	.61 .65	329 10R	-10.0 N 20 23	2-, 9-	Bartlett	Baltimore, Maryland	3R, 54, 100, 200×	S=3 T=5			pc	3*	B
1350	11/20/72	2020	Proclus	46E, 16N	Dark patch in crater. Disappeared by next nite. The normal bright ring seemed thickened. On Dec. 7. the crater appeared bright. Drawings. (prob. real LTP, nr. FM).	"	"	" " 61 30		14.7	.99 .99	88 134R	-0.1 N 20 23	5-, 31 ms?	Farrant	Cambridge, England	8.5L, 175×			361	3*	D
1351	11/21/72	2130	"	"	Thickened bright ring remained, but the dark patch had disappeared. (dark patch prob. real temporary phenom. as it was seen nr. FM when contrasts are strongest, yet disappeared).	N 21 00 D 19 13	D 04 14	61 30 61 15 53 56 60 22		15.8	.02 .02	101 33S	+0.9 N 20 23	4-, 16 ms+1?	"	"	", 130×			"	1	B
1352*	12/10/72	2111	Grimaldi,	66W, 5S	Schmitt, while orbiting moon on Apollo 17 mission saw a flash in Grimaldi. When questioned by the author (WSC) after return, he said that he was dark-adapted & couldn't say whether it was a cosmic ray flash or not. (many other past rept's of similar phenom. seen fr. earth, see # 1167, e.g. , suggest he saw a lunar phenom.).	"	"	" " 55 25		5.0	.71 .73	321 95R	-9.6 D 20 10	2-, 6	Schmitt	at moon	naked eye	S=10		pc, 413	3*	B
1353	12/11/72	2030-2142	Alfraganus	17E, 6S	At 2035, reddish color on limb, E. side of equator area. Estimated brightness =3 (mag. or albedo ?). Has albedo of nearby plain as 3. Apparent diam. =2(mi ?). (chrom. aberr. ? Apollo 17 watch).	"	"	" " 56 13	12 m	6.0	.73 .76	345 2R	-8.6 D 20 10	2-, 6	Jean	Montreal, Canada	4R, 250×	S=VG		pc	1	R
1354*	12/11/72	2228	Mare Orientale	88:W, 20:S	Cernan saw a flash on the E. rille in the mare, as he orbited over it on Apollo 17.	"	"	" " "		"	"	345 103:R	"	"	Cernan	at moon	naked eye	S=10		413	3*	B
1355	12/12/72	2100?	Alfraganus	17E, 6S	Reddish color seen tonite also. (chrom. aberr. ? Apollo 17 watch).	"	"	" " 56 58		7.0:	.76: .79:	357: 14:R	-7.6: D 20 10	4 ,12+ sc	Jean	Montreal, Canada	4R, 250×			pc	1	R
1356	12/14/72	2200-2230	Proclus	46E, 16N	At 2210h it had a reddish & yellowish colors, no variations. Estimated albedo was 2. (chrom. aberration ? Apollo 17 watch).	"	"	" " 58 40	1/2 h	9.1	.93 .84	21 67R	-5.5 D 20 10	3 ,17-sc+2, ms+1	"	"	"	S=G T=9 (tel. ?)		"	1	R
1357	12/15/72	2200?	"	"	Reddish & yellowish colors. No variations. (chrom. aberr. ? Apollo 17 watch).	"	"	" " 59 29		10.1:	.96: .87:	33: 79:R	-4.5: D 20 10	7-, 28-ms?	"	"	"	high alt.			1	R
1358	12/17/72	1830	"	"	Crater appeared very bright. (Apollo 17 watch).	"	"	" " 60 49		10.9	.98 .94	55 101R	-2.3 D 20 10	4-, 22-ms?	Farrant	Cambridge, England	8.5L			361	2	B
1359	1/17/73	2135	"	"	Walls brilliant, dull white spot seen just S. of center of floor. Not nearly as bright as walls.	Ja 16 21 F 13 11	Ja 28 16	60 29 59 34 54 09 60 22		13.2	.05 .04	74 120R	-1.0 Ja 18 22	2+, 11+	Coates, Neville	England "	8L, 240×	S=E ?		362	2	B
1360	1/25/73	1020-1030	nr. Calippus, white spot in Walter	10E, 38N 2W, 34S	Bright spot nr. Calippus. Sketch. (Calippus α, or unnamed peak N. of it ?). Est. albedo =8.5 & surroundings at 0.5 at 1015h. Obj. not noticeable at all during 1st 1/2 cycle thru FM in Dec. & Jan. White spot in Walter barely distinct fr. surroundings & crater rim. It's albedo =8, surroundings =7. (ALPO-LTP prog.	"	"	" " 55 02	10 m	20.8	.34	167 3S, 15S	+7.0 Ja 18 22	5 ,26+ ms?	Frank	E. Pepperell, Massachusetts	6L, 100×	S=G	ALPO-LTP prog.	363 pc	0, 3*	B, D
1361	2/12-/73 13	2230-0130	Dawes	26E, 17N	Brightening of some of permanent pts. monitored while others stayed steady & normal brightness. (other nites' obs. suggest that he saw end of dimming event & return to normal). Distinct fluctuations.	"	"	" " 59 33	2 h	9.6	.98 .97	31 57R	-4.4 F 17 10	3 ,17, 3 , 7 ms	Porter	Narragansett, Rhode Island	6L, 96×	S=8 T=0-4 alt. 55-75°	"	"	4*	D, G
1362	2/13/73	2346-2350	Calippus & vicinity	10E, 38N	Large dark patch, albedo =3 present E. of Calippus. Drawing. (shows it into Calippus also). Never seen before or since. Albedo normal (4.5) at 2350h. (obs. monitors Calippus in ALPO-LTP program).	F 13 11 Mr 10 08	F 25 13	59 34 59 19 54 14 59 23	4 m	10.6	.04 .02	44 54R	-3.4 F 17 10	3 , 7 ms	Frank	E. Pepperell, Massachusetts	6L, 100×	S=G alt. =45°	"	"	3*	D
1363	2/17/73	2215-2245	Aristarchus	47W, 23N	Rose tho't W. rampart was diffuse over 1/3 its length. Alerted Hunt who tho't there was a dark patch (in poor seeing) but the diffuse effect was neg. Robinson rep't. things norm. also Coleman(S=P) Moore thinks not real phenom.	"	"	" " 58 02	1/2 h	14.5	.19 .18	92 45R	-0.5 F 17 10	5 ,23-ms?	Rose, Hunt, Robinson, Coleman	N. Devon, Eng. Cambridge, Eng. Devon, Eng. England	14L 6L 10L	S=P S=P		364	1	G, D

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term. Dist.	Days fr. FM & Solar	Observer	Location	Telescope	See-ing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ , β ° °		m d h	m d h	π_p , π_a , π' , 1900A.D.	d	d		°	d, m d h K_p, ΣK_p			Ap K Pw					
1364	4/ 5/73	1840-1930	Mare Crisium	63E, 20N	Saw a bright strip that extended deep into dark side. Did not see it in May or June at same phases. Alignment same as E. boundary of M. Cris. Eng. obs. at same time noted nothing unusual.	Mr 10 08 Ap 06 04	Mr 25 09	59 19 60 06 54 13 60 05	50 m	2.3	.98	302 5R	-11.9 Ap 17 14	4-,12- ms+2?	---, Hitchens, Peters	Hungary Lincolnshire, Kent, Eng.	11L 8L	S=P		364	1	B
1365	4/ 6/73	1934	Aristarchus	47W, 23N	Unusual brightness. Att'n. drawn from occultation. Had a bright pt. of mag. 7 as if slightly defocused star, yellowish in color on NE (IAU?) rim. Brightened & expanded. Later scintillated. Wife called, each indep. drew same phenom. Hitchens also saw glowing in crater in same time period. (indep. confirm.).	Ap 06 04 My 04 06	Ap 22 02	60 06 60 53 54 07 60 04		3.3	.00 .02	315 -92R	-10.8 Ap 17 14	2 , 8+	E. Moore, C. Moore, Hitchens	England? " Lincolnshire,	Eng. 11L?			"	5*	B,G,R
1366	5/ 6/73	0448	Reiner	56W, 7N	Saw slow albedo increase to mag. 6, when suddenly in NE(IAU?) quad. of floor was a very bright flash, pinpt. of blue-white light to mag. 2 for @ 0.5s. Afterward, the bright glowing of the crater diminished, taking 15-20s to return to normal albedo.	My 04 06 Je 01 14	My 19 14	60 53 61 19 54 01 60 22	secs	3.3	.09 .07	313 -103R	-11.0 My 17 05	4+,18 sc	Bell	Lodi, California	8.5L, 142×		SI	pc	3*	B,V
1367	6/ 6/73	0240-0330	S. Cusp	29E, 90S	Green, white, red color. (chrom. aberration?).	Je 01 14 Je 30 00	Je 15 17	61 19 61 17 53 58 58 41	50 m	4.9	.21 .16	331 0 R	-9.7 Je 15 20	3-,16+	Jean	Montreal, Canada	4R, filters	S=VG	ALPO-LTP prog.	pc	0	V,R
1368	6/ 6/73	"	Peirce, NE M. Tranq. Piccolomini	53E, 17N 45:E, 17:N 32E, 30S	Obscuration on Peirce; vis. in red & blue filters. No features discernible. Obscur. in NE part of M. Tranquillitatis (nr. Proclus on Palus Somnii? on drawing). Red on Piccolomini on W. wall & c.p. (chrom. aberr. or low light level?). Clearly vis. in red filter.	"	"	" " "	"	"	"	331 24R, 16:R 3R	"	"	"	"	"	"	"	2* 1 1	G,R
1369	6/15/73	0612-0621	Aristarchus	47W, 23N	Pinkish-red glow on E. wall--where he usually sees the violet glare. (LTP albedo =7?, normal =5?, nearby plain=1?). All along rim nr. crest & went over EW-BS. Wanted to compare a bright spot on Lyell with Aris. wall brightness. At 0612h pink glow changed to a rust-brown, fading rapidly & gone at 0615h. First time he had ever obs. a red glow. (in 20 yrs!).	"	"	" " 53 59	3 m	14.1	.48	83 36R	-0.6 Je 15 20	3+,22 sc-2, ms+2?	Bartlett	Baltimore, Maryland	3R, 54, 100, 300, 360×	S=3 T=3	"	pc	4*	R,B
1370	7/14/73	0215-0305	Godin	10E, 2N	Albedo changes in some pts. yellow-orange color on rim. Wondered if it were atmos. LTP albedo=7,7,7,6.5. Normal albedos=7,7.5,6.5,6.5 for same pts. Nearby plain albedos =6. LTP from 0250-0300h. Intensity normal at first; pts. in W. decreased & N. pt increased. No difference in intensity in red filter till suddenly it jumped out & became vis. above the high background albedo. Sketch. He thinks it was atm. seeing.	Je 30 00 Jy 28 07	Jy 12 22	61 17 60 49 54 01 54 05	10 m	13.6	.47 .50	75 85R	-1.4 Je 15 20	4+,25+ ms+1?	Porter	Narragansett, Rhode Island	6L, 45, 90×	S=P? T=2	"	"	2	R,B,I
1371	7/17/73	0330-0345	LaLande	8W, 5S	Star-like pt., variations, 1-2s, seen only at 40×, not at higher powers. LTP albedo =10, normal =8, nearby plain =6, (geom. & instrum. & atm. & refl. material at site effects?).	"	"	" " 54 50	1/4 h	16.6	.60 .61	112 76S	+1.7 Jy 15 12	3 ,12-	Galgocy	Wahington, New Jersey	2R, 46, 117×	S=VG T=5	"	"	1	B
1372	8/ 7/73	0138	nr. Herschel	4W, 5S	Craterlets nr. Herschel all invis. & should have been seen. (obscur.?). Craterlets designated C, D, E, F & are E, SE of Herschel.	Jy 28 07 Au 25 07	Au 09 10	60 49 60 02 54 08 54 34		8.3	.35	8 4R	-7.0 Au 14 02	3+,16:	Bartlett	Baltimore, Maryland		S=4 T=2.5	"	"	3*	G,D
1373	9/11/73	0223	Grimaldi	65W, 5S	Lower 1/2 of wall very dull at 4° bright, distinct bluish-gray. Upper 1/2 bright at 8° albedo. Seems to be soil color, but is randomly vis. --due to local agency, e.g. gas?.	Au 25 07 S 20 12	S 06 03	60 02 59 18 54 14 55 53		14.0	.64	76 11R	-1.5 S 12 15		"	"	4.25L, 51-145×		"	"	3	V,G,D,B
1374	10/ 5/73	0105	nr. Herschel	4W, 5S	Craterlets C & D were conspicuous; E & F were invis. All are nr. same size & nr. each other. On Oct. 7(# 1372) all were invis. (both pairs are fresh & similar morphology craters).	S 20 22 O 16 01	O 03 23	59 18 59 37 54 15 54 21		8.4	.54 .56	8 4R	-7.1 O 12 03	4+,16- ms?	"	"			"	"	3*	G,D
1375	10/ 7/73	0100?	"	"	All craterlets (C, D, E, F) were invis. & should have been seen.	"	"	" " 55 04		10.4:	.60: .62:	32: 28:R	-5.1: O 12 03	3+,11 ms?+1	"	"			"	"	3*	G,D
1376	10/16-/73 17	2216-0100	Aristarchus	47W, 23N	Invis. of NW wall bands. Seeing by no means perfect.	O 16 01 N 12 15	O 31 19	59 37 60 30 54 09 59 33	3 h	20.3	.04 .04	152 75S	+4.9 O 12 03	5+,30- 5-,32 sc	Morgan	England				366	1	B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	Φ/π'	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ° , β °		m d h	m d h	π_p ' " π_a ' " π ' " 1900 A.D.		d	d	°	m d h	K_p, ΣK_p			Ap K Pw					
1377	10/17/73	1130	Limb, nr. Doerfel mts. or Hansen ?		Glow seen 1-2sec. reappearance of Saturn's rings at place of ring's appearance at dark limb. Obs. attributed it to Sat. & its rings. (could be gas or dust at lunar surface). Eye was attracted to the glow which delineated the limb. Pos. angle at 210° at emersion, at Edmonton.	O 16 01 N 12 15	O 31 19	59 37 60 30 54 09 59 28		20.9	.05	160 70S	+5.4 O 12 03	5-, 32 sc	Androsan	Edmonton, Canada	6L, 230×			401	2	B,G
1378	10/18/73	0603	nr. Herschel	4W, 5S	Shadow conspicuous in C & D craterlets, but E & F could not be found at all. All should have been seen.	"	"	" " 59 19		21.7	.08 .08	169 15S	+6.2 O 12 03	5, 28+ ms, sc+2	Bartlett	Baltimore, Maryland			ALPO-LTP prog.	pc	3*	G,D
1379	11/ 2/73	2210-2359	Lubbock	40E, 5S	Color in crater changed fr. gray to brownish--strong enough change to be noted. Never saw anything like this in 7 yrs. of observing.	"	"	" " 54 33	2 h	7.9	.67 .65	0 40R	-7.6 N 10 14		Hill	Greensboro, N. Carolina			"	pc, 363	3*	R
1380	11/ 3/73	0132	Ptolemaeus	3W, 9S	Large oval bright area between center & S. wall tho floor was in shadow. Looked like a feeble surface glow. Might be a high area but doesn't think so. (would have to be higher than rim of Ptol. A which was invis. & no areas on floor are higher than that). W. wall rim was barely in sunlight. Drawing.	"	"	" " 54 35		8.0	.58 .66	2 - 1R	7.5 N 10 14	2, 10-	Bartlett	Baltimore, Maryland	4.25L, 51, 141×		"	pc	3*	B
1381	11/10/73	2000 ?	Aristarchus	47W, 23N	Attracted to crater because of an orange hue extending toward Herod. Has seen this at other times. Thinks not an LTP, but actual color of ground.	"	"	" " 60 06:		15.7:	.93:	96: 49:R	+0.2: N 10 14	3+, 15+	Coates	England	8L, 200×	alt. high		365	2	R
1382	11/11/73	2040-2305	Proclus	46E, 16N	At 100× showed a bright spot in S. part of crater. At 300× was vis. but power too high. In 8-in refr. at 170×, at 2055h 2 spots were present. Confirmed by Young. Seeing was improving. At 2140h in 12-in refr. at 260× the lower spot seemed distinctly enlarged & vaporous. Decided it was due to poor seeing. Later the 2 spots were better defined & separated but lower moved away fr. larger one & they seemed more separated than earlier. Obs. ended at 2305h when they decided it was not an LTP but was 2 craters instead of humps. There were neg. repts. from others at same time. (there are no craters in Proclus).	"	"	" " 60 26	2.5 h	16.8	.98	109 25S	+1.3 N 10 14	2+, 12	Savill, Young, Pedler, Livesey	Cambridge, Eng. Yorks, Eng. Bristol, Eng. England	12R, 100 & 300× 6L 6L ?	S=F		"	2	B,G
1383	11/15/73	0634	Aristarchus	47W, 23N	Blue patch in crater. (similar to many of Bartlett's obs. ?).	N 12 15 D 10 22	N 28 13	60 30 61 14 54 01 59 44		20.2	.11 .10	149 78S	+4.7 N 10 14	3, 17 ms ?-2	Rule	Edinburgh, Scotland	4L, 36×			366	2	V
1384	12/ 2/73	22:17:33	Limb (occultation)	90W,	KAquarii, a wide double, faded perceptibly before disappearing in occult. Double is not the explanation. (many rep'ts. of similar fades for single stars).	"	"	" " 55 26	<1 s	8.1	.36	5 -85R	-7.3 D 10 02		Barrett, Brick	New York, "	3.5LQues.			385	4	G
1385	1/ 7/74	1630-2700	Riccioli	75W, 3S	Bright spot & dark patch changing in size. (atmos. aberr. ?).	D 10 22 Ja 08 11	D 25 22	61 14 61 30 53 56 61 24	1/2 h	14.0	.96 .97	78 3R	-0.8 Ja 08 12	2-, 4+	McKay	South Downs, England	3R, 135×	S=IV boiling		367	1	B,D
1386	1/ 8/74	1815-2400	Aristarchus	47W, 23N	Orange & viol. hue in crater seen by Billington. Robinson, Amery & Moore reported neg. blink results at this time. (prob. chrom. aberr., Moore concurs).	Ja 08 11 F 06 00	Ja 21 22	61 30 61 11 53 57 61 28	6 h	15.1	.02 .01	92 45R	+0.4 Ja 08 12	4-, 16 ms	Billington, Robinson, Amery, Moore	England, Devon, Eng. Reading, Eng. Selsey, Eng.	2.5R35, 11×			"	0	R,V
1387	2/ 6?/74	0145, 0245	Pythagoras-Cleostratus	68W, 63N 80W, 60N	Event normal in integrated light. Light, full surface detail in red filter, dark, with full surface detail in blue filter. Other term. features did not show it. Only E. floor of Pythag., Babbage northern crater chain & NW floor of Cleostr. (According to Fitton's criteria this was a tenuous gas above surface. Date given as 5th, but term. was at least 3° E. ∴ these features were in the dark then. Ancill. data given for 6th).	F 06 00 Mr06 06	F 18 08	61 11 60 25 54 02 61 11	1 h	13.6	.00: .00:	77: 9:R -3:R	-0.9 F 07 00	3, 14-	Lord	St. Anne's-on-Sea, Eng.	3R, 135×	S=E T=E		"	3*	R,G
1388	2/27/74	1724		55-30W, 5-2N	A flash of mag. 7.7 (estimated from SAO 093042=7.8 & SAO093052=7.5 both in field of view) was projected against earthlit disk. Obs. speculates whether a lunar meteor or refl. from an artificial satellite. (or Earth meteor ?).	"	"	" " 57 25	<0.1 s	5.4	.77	339 51-76R	-8.7 Mr 08 10	5, 31 ms+0.5	Weith-Knudson	Copenhagen, Denmark	12L, 72×		SI	pc	0	B

ORIGINAL PAGE IS
OF POOR QUALITY

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term Dist.	Days fr. FM & d,	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ ° β °		m d h	m d h	π_p ' " π_e ' " π ' "		d	d	°	m d h	K_p ΣK_p			Ap K Pv					
								1900A.D.														
1389	3/ 2/74	2300	Limb	90W,	A fine deep red line seen at 1st contact with B-ring of Saturn. Nothing unusual at A-ring contact. Persisted during occult. of B-ring. It divided into 2 components & space between B-ring & globe cutting ring into 2 disjointed ends persisted till dark limb passed onto globe of Saturn, then a short red line corresponding exactly to chord of planet disk defined by lunar limb. It increased in length as occult. progressed. It suddenly vanished after 3/4 of globe had been occulted. No afterglow at spot on limb, no irreg. at limb could be seen. Obs. eliminates Saturn, telescope, & atmosp. as possible causes. Suggests refraction from tenuous atm. of destructive interference of reflected light from very small angle at limb, or diffraction of Saturn light grazing limb.	F 06 00 Mr 06 06	F 18 08	61 11 60 25 54 02 59 21	min.	8.8	.87 .88	20 -69R	-5.4 Mr 08 10	4+,26 ms-1	Fitton	Lancashire, England	8.5L,200×	S=E T=E			367	1	R,G
1390	3/ 3/74	1906-2103	Plato	9W, 51N	Robinson got blink in SE wall adjacent to rim shadow at 1906h & alerted network. Ford reported neg. at 1935h, but Robinson still had blink at 1940h tho fainter, red at times. Findlay at 1943-1952, & 2000h-2005 got neg. Robinson at 1956h no longer saw blink, but it returned at 2005h. Light in both red & blue filters. Not steady, but coming & going, & gone at 2009h. Moore at 1959h-2100, Kennedy at 2012-2030h, Taylor at 2048-2103h, & Fitton at 2005h got neg. results. (latter time coincides with Robinson's 2nd blink).	"	"	" " 59 48	1 h	9.6	.84 .91	30 21R	-4.6 Mr 08 10	5-,26+ ms	Robinson, Ford, Findlay, Moore, Kennedy, Taylor, Fitton	England, Scotland Selsey, Eng. England Scotland England	10R,200× 10R,180× 12.5L 8.5L 8.5L	S=P alt.=65°			"	1	R,G
1391	4/ 3/74	0110-0145	Parry	16W, 8S	Darkening of floor & brightening of central crater. Pulsations for 1 min. Albedo of LTP =2 (fl.), 6.5 (c.p.). Normal floor = 3?. Floor seemed darker than earlier & approached surrounding plain(=2) while N-S streak seemed more conspicuous. Pulsations same freq. as star excursions so prob. due to terr. atm. aberr.. Streak most conspicuous at 0145h.	Ap 02 16 Ap 27 16	Ap 14 22	59 32 59 22 54 15 59 32	1/2 h	10.1	.02 .02	8 22R	-3.8 Ap 06 21	6,36- sc,ms	Porter	Narragansett, Rhode Island	6L	S=F T=2	ALPO-LTP	pc prog.	2	D,B
1392	8/ 3/74	0015	Atlas	44E, 47N	Huge ink spot on dazzling floor, close to inner slope of S. wall. (normal dark-haloed crater? not LTP unless darker than normal if it's the dark-haloed cr.)	Jy 19 22 Au 17 07	Au 03 01	61 20 61 19 53 58 53 58		14.5	.50 .50	88 132R	-0.2 Au 03 04	5+,34+ ms,sc+1	Travnik	Brazil	6L,225× yellow filtr	S=E T=E			368	1	D
1393	9/ 8/74	0445-0630	Aristarchus	47W, 23N	Saw a bright, luminous, blue, misty cloud on the NE rim. Obscur. for 1st hr. then gave way to pink & features became vis. Cloud was tear-drop shape. No movement to glow. Pink cloud glowed too. Very tenuous by 0130h. (Nakamura says there were no seismic events within several hrs. of this time). Another person saw it without being advised as to where it was.	Au 17 07 S 14 16	Au 30 05	61 19 57 19- 60 50 54 00 57 21	1.75h	21.4	.81	170 57S	+6.4 S 01 20	3,15	Cowan, Johnson	Dublin, Texas	8L,59, 152×	S=7			pc	5*	V,G,R
1394	9/27/74	2245-2340	Bullialdus	22W, 20S	Saw yellowish-Orange color in crater. After clouds passed at 2300h color still there & gave a slight blink which no other craters did. Not seen in red filter, dark in blue. Ford saw it along ridge fr. c.p. to SSW wall. Alert did not bring confirm as clouds intervened for all others.	S 14 16 O 12 16	S 26 17	60 50 60 01 54 07 54 13	1 h	11.9	.53 .48	51 29R	-3.4 O 01 10	5,30 ms?	Findlay, Ford	Dundee, Scotland	10R,150, 180×,filters				368	4*	R
1395	9/29/74	0000	Babbage	55W, 59N	Activity in SW floor between A & W. wall. Details not obscured in either filter, but darker than surroundings. (luminescence by Fitton's criteria).	"	"	" " 54 27		12.9	.57 .51	64 9R	-2.4 O 01 10	4,24 ms?+2	Lord	Dundee, Scotland	10R,125×	S=II-III			2	B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ	Colong. Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m	°	λ ° , β °		m d h	m d h	π_p ′ ″ π_s ′ ″ π ′ ″		d	′, d	°	d, m d h	K_p, ΣK_p			Ap K Pw					
								1900A.D.														
1396	2/22/75	1900-2250	Prinz, Aristarchus	44W, 25N 47W, 23N	Diffuse white obscur. Pulsations of 30-50s intervals. Ceased at 2250h & event fading. Neg. from 2235h. Photos neg., no color. Aris. neg. (Foley)(overlapping obs. but contradiction). At 1900h Fitton saw Aris. blue, no obscur. in white, red or blue light. No blink. Not telescopic effect. Obs. 4.5h. Says it & next 5 nites' obs. were due to high pressure system W. of obs.	Ja 28 09 F 25 22	F 12 04	61 19 61 30 53 55 60 04	4.5 h	11.6	.89	50 6R, 3R	-3.1 F 26 01	3-,15 ms	Foley, Fitton	Kent, Eng. Lancashire, Eng.	12L 8L	S=G S=II-III=VG		369	3*	G, V
1397	2/23-/75 24	1800-0024	Aristarchus	47W, 23N	Slate-gray tinged with blue, abnormally bright, fading at 1847h & decreased activity at 2045h after cloudy period. Blue on N. wall at 1900h but at 1910h no color, but obscur. None from 2104-2146h(Foley). Amery at 1900h noted shadowy gray nr. shadow under S. wall, indistinct small area, no color. At 2000h activity increased. Color neg. fr. 150-300× till 2110h(Hunt). Neg. fr. 2020-2100h in bad seeing, & at VG seeing at 200× all neg. (color blink filters). From 2345-0020h(Fitton). (confirm. of activity earlier, & neg. later).	"	"	" " 60 49	6 h	12.6	.93	63 16R	-2.2 F 26 01	6,31+, 4,24+ ms?	Foley, Amery, Hunt, Turner, Fitton	Kent, Eng. Reading, Eng. Cambridge, Eng. Sussex, Eng. Lancashire, Eng.	12L 10L 2.5R 8L 8L	S=G S=P-VG		"	5*	G, V
1398	2/24/75	1800-2330	"	"	(Foley) 1800h—slate gray bluish on all of crater; blue at 1816h, fading at 1835h, no color on floor. At 1949h brilliance reduced, eyepiece tested at 1959h with result of elong. gray blur & afterward activity at reduced level. Blue again at 2013h. (Gannon) at 1851h saw red tint on S. rim (instru.), neg. in white & filter lite till 2000h. (Peters) at S=P had impression of large faint blink on S. side, diffuse till 2000h, then seeing improved & saw darkish patch on S. wall—darker in blue than red. Detail was clear in blue, indistinct in red. Craters on limb were normal to 2017h, neg. at 2058h & 2130h. (Farrant) at 2000h, normal. At 2053h color in small area to W. of W. wall. (Turner) at 2230h-2300h got neg. (Fitton) at 2330h got neg. in white, seeing too poor for filters. Fitton & Farrant think obs. due to atm. effects. (activity earlier & none later confirmed).	"	"	" " 61 19	2 h	13.6	.96	75 28R	-1.2 F 26 01	4,24+	Foley, Gannon, Peters, Farrant, Turner, Fitton	Kent, Eng. Middlesex, Eng. Kent, Eng. Cambridge, Eng. Sussex, Eng. Lancashire, Eng.	12L 6L 8L 8L 8L 8L	S=P S=II S=G		"	5	V, R, G
1399	2/26-/75 27	2100-0030	"	"	(Foley) Neg. at 2100h. At 2123hNE wall was blue, decr. at 2220h. New spot at 2221h due N. At 2227h blue fr. ENE to N. & faint blue on rim. Interior clear detail, but obscur. at ENE-N. (Kennedy) at 2222h got neg., also at 2229h-2300h. (Gannon) at 2245-2253h got neg. (Amery) at 2315h saw crater bright, bands clear, c.p. bright & very bright pt. to NE of c.p. N. wall bluish gray mist extending into N. part of crater. Got slight blink in red till 2335h. (Fitton) at 2330h saw blue in N. interior but no blink, no obscur. in long exam. Blue varied with position in FOV. Polariz. with many rotations showed normal. Blue only in Aris., none elsewhere till 2359h. (Turner at 2330h got neg. till 2359h. (Amery) at 2359h saw most detail clear. Blink distinct in red. At 0030h(27th) saw blue mist now gray, seeing deteriorating. Herod. was normal. (Fitton explains obs. as due to high press. system W. of obs. with temp. inversions).	F 25 22 Mr 26 09	Mr 11 05	61 30 61 08 53 56 61 19	3.5 h	15.6	.04	99 52R (128S)	+0.9 F 26 01	4-,15+, 2+,10-	Foley, Kennedy, Gannon, Amery, Fitton, Turner	Kent, Eng. Dundee, Scot. Middlesex, Eng. Reading, Eng. Lancashire, Eng. Sussex, Eng.	12L 8L 6L 10L 8L 8L	S=E S=III-IV		"	5*	V, G, R, B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	See-ing	Inform. Source	App. Ref	Wt.	Phenom. Type
	m d y	h m		λ , φ ° , °		m d h	m d h	π_p , π_A , π "		d	π, d	°	d, m d h	K_p, ΣK_p			Ap K Pw					
								1900A.D.														
1400	2/27-/75 28	2200-0100	Aristarchus, Proclus, Menelaus	47W, 23N 46E, 16N 16E, 16N	(Robinson) at 2200h got blink on E. wall, strong at 200× till 2225h. (Fitton) at 2200h (moon low) at 200× saw vivid blue toN., vivid yellow & orange to S. in Aris., Proc., Menelaus, & many other bright craters til 2300h. Then Aris. less blue & mare obj. no colors. No blinks in these craters. No obscur. Polariz. normal till 2330h using many rotations. At 2330h Aris. blue in N. but fainter. Only Proc. remained blue till 0020h (28th). Photo-electric scan at 2340h was normal for Aris. (600μ amps) compared with Tycho (900μ amps), total of 10 scans. All neg. with 15km resolution. Blink neg. but blue still vis. in N. in white light till 0030h. At 0100h (S=III at 200×) Proc. clear of blue, Aris. nearly clear, blink neg. (Amery) at 2310h saw blue on N. rim of Aris., no color in other craters at 300× No blink in Aris. S. part of Aris. indistinct, but not abnormal. No blink till 2350h. (Mills Observatory) at 0000h checking rep'ts got blink in S. part of Aris. Blue only in N. part. Similar blue in bright craters in E. hemisphere & blue halo on S. limb., till 0020h. Concluded due to optical effects. Fitton says due to atm. effects from high press. sys. W. of obs. (blue on one rim & red on other due to chrom. aberr. ? If spurious, should get no blink & similar crater conditions should exhibit same phenom. all over moon).	F 25 22 Mr 26 09	Mr 11 05	61 30 61 08 53 56 60 48	3 h	16.8	.07	113 114S, 21S 51S	+2.0 F 26 01	2+,10-, 4-,21-	Robinson, Fitton, Amery, Mills Observ	Teignmouth, Lancashire, Reading, Eng. Dundee, Scot.	Eng. 10L Eng. 8L 8L 10L			369	5	V,R
1401	2/28/75	0320-0345	Aristarchus & vicinity	47W, 23N	Orange flash in crater that then spread over whole crater then turned to bluish haze at 0320h. Couldn't see surface underneath. All W. hemisphere was brighter than normal. Blue was only on Aris. Rest of moon was examined for phenom. but not seen elsewhere. Gone by 0343h (just a few hrs. after Eng. obs. --not likely that U.S. obs. had temp. inversion high press. sys. W. of him too).	"	"	" " 60 40	23 m	17.0	.08	115 112S	+2.2 F 26 01	4-,21-	LeCroy, Sr. LeCroy, Jr.	Springfield, Virginia	4.5L, 45, 150×			pc	4*	R,V,G
1402	3/ 2/75	2300? or 0100?	Plato	9W, 51N	Color noted in crater. (v or R?).	"	"	" " 58 09? or 59 03?		18.8? 19.8?	.24: .14: .18	138? 150? ?39 ?S	+4.0? F 26 01	4-, 19		England				370	1	V?R?
1403	3/ 4/75	"	"	"	" " " " "	"	"	" " 56 20? 57 08?		20.8?	.32 .25	?162? ? 15 ?S	+6.0? F 26 01	3+,33		"				"	1	V?,R
1404	3/18/75	0057-0400	Aristarchus	47W, 23N	While obs. earthshine on moon, saw it glowing--abright steady star-like glow, est. at 5-6th mag. First noted at 0057h. Obs. other obj. then came back to it. It was still there--till moonset (@0500h). Saw it in other telescopes & Lojeck took photos. (photo shows Aris. prominent, but also LaLande, Pytheas & Timocharis. 2 prs. in Aris. but there are other pts. on the print, it may be grain).	"	"	" " 55 56	3 h	5.1	.71	334 -73R	-9.3 Mr 27 10	5-,24+	Reiland, Brown. Lojeck	Pittsburgh, Pennsylvania	6L, 45× 8L, 200×, photos			pc	5*	B
1405	3/24/75	2200?	Proclus *	46E, 16N	Brightenings(?). Seen by more than one obs. ? Foley recorded a ray projection on photos, but not seen vis. by others.	"	"	" " 60 49		11.9:	.96:	45: 91:R	-2.5: Mr 27 10	4 ,21+	---, Foley	England, England				412	5	B
1406	5/25/75	0500:-0600:	Aristarchus Römer?	47W, 23N 36E, 26N	Photo dur. ecl. shows Aris. gleaming white & a bright spot on E. (IAU?) rim of mare Seren. (Römer?). Observer in 8-in refl. saw no detail.	My 20 20 Je 14 22	Je 02 04	59 32 59 25 54 15 58 10	1 h:	13.9	.18	90 43R 54S	0.0 My 25 06	5-,21-		U.S.A.				386	5*	B

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	Φ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform Source	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ° , β°		m d h	m d h	π_p ' " π_a ' " π " " 1900 A.D.		d	π, d	°	d, m d h	K_p, ΣK_p			Ap. K Pw					
1407	6/17/75	2115- 2245	Maginus	14W, 50S	W. flank & interior seemed to be partly obscured. No red/blue blink detected, but red/integ. light blink was noted. At 2145h no longer obscured, but Maginus G was in a white haze & adjacent to term. above where flanks would have been was an ill-defined misty patch. Rest of term. was sharp. At 2245h obscur. no longer vis. (Lord). Findlay & McConnell noted nothing unusual--all details clear from 2130-2300h. (looked at Maginus ?). (date not given but determined fr. available data).	Je 14 22 Jy 11 20	Je 29 23	59 25 60 09 54 13 59 01	1.5 h	8.0	.17 .11	14 0R	-5.9 Je 23 17	4-,20+	Lord, Findlay, McConnell	Scotland, Scotland, Scotland	3R, 170× 10R, 470×	S=F S=II-III T=4.5+5		372	2*	G, R ?
1408	6/21/75	2150- 2245	Mersenius, Aristarchus	47W, 21S 47W, 23N	McConnell saw an obscur. starting at 2150h which disappeared at 2245h. Moore(?) alerted, saw no anomaly in 15-in refl. & 5-in refr. under fair conditions from 2209-2228h. Reading reported neg. fr. 2250-2345h(after phenom.). Foley reported color in it but also a crater to S. of it & Aris., prob. due to seeing conditions.	"	"	" " 57 29	1 h	12.1	.22 .26	63 16R, 16R	-1.8 Je 23 17	3 ,17+	McConnell Moore ? Reading Foley	N. Ireland Sussex, Eng, Rushden, Eng. Kent, Eng.	6L 15L, 5R ? 14L 12L	S=F S=P		"	5; 0	G, R ?
1409	7/24/75	2252	Copernicus, Tycho, Fracastorius	20W, 9N 11W, 42S 33E, 21S	Cop. &Tycho were both indistinct in red & blue filters. Fracas. had a blink. (red or blue ?).	Jy 11 20 Au 08 20	Jy 27 16	60 09 60 55 54 06 54 31		15.7	.47	107 93S, 84S, 40S	+1.7 Jy 23 06	3-,13- sc-1	Robinson	Teignmouth, England	10L ?or4R	?		386	3	G, R ?, or V ?
1410	7/27/75	2245	Plato, Thecphilus, Fracastorius	9W, 51N 26E, 11S 33E, 21S	Blinks in these 3 craters, "again in Fracas." which he thinks was spurious. (in all 3 or just Frac. ?). Their floors were brighter in red than blue.	"	"	" " 54 06		18.7	.51 .58	143 46S, 11S, 4S	+4.7 Jy 23 06	3+,20- sc+2	"	"				"	1	R ?
1411	7/29/75	0300	Limb	90E ?	51Pisc. at emersion she saw a flash or spike of light which preceded emersion of primary by @ 0.4s. The 9.0mag. companion appeared some mom ents later. Howick, @ 1 m away, with a 3.5-in refl. noted nothing unusual. (no 3rd companion known).	"	"	" " 54 15		19.9	.62	158 68S	+5.9 Jy 23 06	2-, 9-	Fraser, Howick	England "	6L, 70× 3.5L			"	2	B
1412	8/ 2/75	0223- 0249	Aristarchus	47W, 23N	Floor of crater was slate gray/blue & a dense blue-viol. obscur. at NW corner of floor. Photos show smudge there. Phenom. vanished at 0249h. No alert or blink in order to get photos before it faded. Crater was abnormally bright.	"	"	" " 56 23	26 m	23.9	.76	206 21S	+9.8 Jy 23 06	2+,15- sc+2	Foley	Kent, England	12L, photos			"	5*	G, V
1413	8/25/75	0542- 0554	Herodotus, Aristarchus	48W, 22N 47W, 23N	Prior to 0542h the 2 craters were 2 bright spots within bright area. Then a brightness developed merging them together into one big bright area with no discernible details. Returned to normal at 0554h. Sketches. Albedo=10+ where normal albedo is 9.5.	Au 08 20 S 06 04	Au 24 04	60 55 61 22 53 59 54 03	12 m	17.7	.53 .58	129 99S, 98S	+3.4 Au 21 20	3-,18-	LeCroy, Jr., LeCroy, Sr.	Springfield, Virginia	4.5L75×	S=VG T=3	ALPO-LTP prog.	pc	4*	B, G
1414	9/18/75	2100 ?	Aristarchus	47W, 23N	Deep blue-viol. spot in NW (IAU ?) interior corner.	S 06 04 O 04 15	S 20 07	61 22 61 20 53 57 54 03:		13.0:	.44:	70: 33:R	-1.7: S 20 12	4 ,23	Foley	Kent, England	12L			402	3	V
1415	10/16, /75 18	2000 ?	"	"	" " " " " "	O 04 15 N 02 01	O 17 11	61 20 60 48 54 00 54 08:, 54 01:		11.7: 13.7:	.47: .43:, .54: .50:	51: 4:R, 75: 28:R	-3.4:, -1.4: O 20 05	4-,18 2+, 9+	"	"	"			"	3	V
1416	11/17/75	0050- 0126	", Herodotus	", 48W, 22N	Both were fused together as an oval & had a bluish cast on the E. rim. In W#25 filter it was white. At 0100h albedo decreased from 10+to 9.5 & more detail could be seen. Separation of the 2 craters began to be seen at 0007h, details much better, incl. c.p. in Aris. At 0110h main brightness & blue tint shifted to N. rim. At 0116h the SW rim was brightest & no color. At 0122h ray had decreased in length & more details seen in oval. At 0123h ray was broken & smaller, becoming very small at 0125h & at 0126. The knob was gone & the edge not bright anymore. Albedo=9. Sketches. (seeing variations meas. were 1/2s in length so LTP variations not due to local atm. cond. Alt. = 65°.	N 02 01 N 30 01	N 14 00	60 48 59 56 54 07 54 42	1/2 h	13.5	.54	71 24R, 23R	-1.9 N 18 22	4+,22	LeCroy, Jr., LeCroy, Sr.	Springfield, Virginia	4.5L, 75, 300×	S=3 T=4	"	pc	3	V, G, B, D

ORIGINAL PAGE IS
OF POOR QUALITY

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	φ	Colong. Term. Dist.	Days fr FM & nr. FM	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref	Wt.	Phenom. Type
	m d y	h m		λ , β		m d h	m d h	π_p π_e π		d	d	°	d, m d h	K_p ΣK_p			Ap K Pw					
								1900 A.D.														
1417	11/18/75	1905	W. ?Limb	90W?	Flash of bluish light on the limb, thru clouds.	N 02 01 N 30 01	N 14 00	60 48 59 56 54 07 55 23		15.3	.67	88 -2:R	-0.2 N 18 22	3 ,13+	Nicolas	Avon, England	2 R			391	1	B, V
1418	11/18/75	1938-2334, 2100:, 2150-2210	Aristarchus	47W, 23N	It appeared much fainter than ever before seen in ecl. by Moore. Fainter than Proc., Cop., & Tycho. Others rated brightness in order--Hell, Stevinus, Furnerius, Proc.; & Proc., Tycho, Hell, Aris. Photos confirmed dimness of it. For some observers it became invis. at S=II (good). Good ranked at least 4 other craters brighter than Aris. & that at 2035h it dimmed. Earthshine cond. extraordinarily good. Peters, at S=IV (fair?) rated Aris. brightest.	"	"	" " 55 26	4 h	15.5	"	90 43R	0.0 N 18 22	"	Moore, Peters, Good, Foley, McKay	Johannesburg, Kent, Eng. Guilford, Eng. Dartford, Eng. Kingston, Eng.	SA2R 8.5L, 120× binoc. 12L, photos 6L, 48×	S=II S=IV		387	5*	D
1419	11/18-/75 19	2315-0005	Menelaus, Manilius, Delambre, Aristarchus	16E, 16N 8E, 15N 17E, 2S 47W, 23N	At 2315h there were 4 glowing spots (incl. Aris.) in the eclipsed moon. At 2350h the 3 patches emerged fr. the dark & appeared as bright spots compared with surrounding craters. Albedo =10+. At 2355h a ray appeared out of NE rim of Menelaus. (normal ?). It appeared just before area emerged & increased in brightness. At 2358h it decreased & continued to do so. The NE edge of Men. appeared very dark at the pt. the ray came out. (normal). At 0000h a ray was extending fr. SW edge (a ridge there) & appeared to obscure features along its path. Albedo =9. The albedos of Manilius & Delambre were 8.5 at 0002h. At 0005h the rays were still apparent but seemed to have returned to normal albedo. Details became apparent in all 3 features.	"	"	" " 55 29	3/4 h	15.5	"	95 69S 77S 68S 48R (132S)	0.0 N 18 22	3 ,13+, 4-,15+	LeCroy, Jr LeCroy, Sr	Springfield, Virginia	4.5L, 75×	S=7	ALPO-LTP prog.	pc	0	B, G
1420	11/18-/75 19	2350-0002	Aristarchus	47W, 23N	At 2350h it was an oval shape (dur. ecl.) with no details seen. It had a ray extending fr. SW rim. (normal). The N. rim was slightly blue & the SW rim very, very slightly red. At 2355h it was clearing & details showed. At 0002h it was clear. Sketches. (colors fit Fitton's predictions for spurious colors due to atm. inversions). LTP albedo = 10+, normal =9, plain =4.5, alt. =40°.	"	"	" " "	12 m	"	"	95 48R, (132S)	"	"	"	"	"	"	"	"	0	V, R
1421	11/21-/75 22	2330-0030?	"	"	Deep blue-viol. spot in NW (IAU?) interior corner. (seen occasionally with obscur. but dates not given).	"	"	" ' 56 54	1 h	18.5:	.72:	131: 96:S	+3.1: N 18 22	5-,24+, sc, 6+,27+ ms	Foley	Kent, England	12L			402	3	V
1422	12/14-/75 15	1705-0030	"	"	In early sunrise conditions, W. wall was less brilliant than usual--matched only by Sharp, Bianchini, & Mairan. Extraordinary detail could be seen on this wall. Also noted intense & distinct blue color entire length of W. wall. 3 others corroborated detail, but not color. Moore found things normal & saw Aris. brightest at 2030-2125h tho Argent & Brumder made it < Proclus.	N 30 01 D 26 04	D 11 19	59 56 59 13 54 13 54 55	7 h	11.8	.56	49 2R	-3.8 D 18 15	3-,12, 3+,17-	Foley, Moore, Argent, Brumder	Dartford, Eng. Sussex, Eng. " "	12L 15L, 250×	S=II S=IV		387	4	D, V
1423	12/19-/75 20	2005-0145	Alphonsus	4W, 13S	Foley reported an unfamiliar dark patch SSE & close to interior wall. Density 60-65% of famous dark areas--grayish-black, circular, diam. 25km (15mi). Moore, in poor seeing saw nothing unusual. Gannon & Hatfield took pics. which show nothing abnormal.	"	"	" " 57 43	4.5 h	16.9	.76	111 73S	+1.3 D 18 15	3-,11+ 3-, 5	Foley, Moore, Gannon, Hatfield	Kent, Eng. Sussex, Eng.	12L, 180, 850× photos			387 p11	2 5	D
1424	12/19/75	2245	Aristarchus	47W, 23N	Suspected anomaly in it.	"	"	" " 57 44		"	"	111 116S	"	3-,11+	Foley	Kent, England				391	1	
1425	12/ /75	1900	Pico	9W, 45N	Unusual events reported which might have been due to minor structural changes. Albedo= 75% (=7.5?).	"	"	" "							Foley, Moore?	Kent?, Eng. Sussex, Eng.				407	2	D?

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Dura-tion	Age	ϕ	Colong. Term. Dist.	Days fr. FM & nr. FM	Solar	Observer	Location	Telescope	See-ing	Inform Sources	App. Ref.	Wt.	Phenom. Type
	m d y	h m		λ, β		m d h	m d h	π_p, π_a, π		d	d	°	m d h	K_p, ΣK_p			Ap K Pw					
								1900 A. D.														
1426	1/15/76	1945			Saw an "explosion" lasting for fraction of a second, followed by a bright spot in same position. (not an astronomer). After discussing it with others, decided it was a moment of transition to greater intensity (better seeing ?). Moore thinks it was atmospheric but says it should be on record. (confirmed by Foley ?).	D 26 04 Ja 20 13	Ja 08 17	59 13 59 46 54 13 57 51		14.2	.81	78	-1.4 Ja 17 05	3 ,12+	Greendaad,	Crawley, England	7×50bino	c.		391	5*	B
1427	1/15-/76 16	2330-0030 ?	Aristarchus	47W, 23N	Abnormally high albedo. (confirm. of Greendaad ?).	"	"	" " 57 58	1 h:	14.4	.82:	80: 33:R	-1.2: Ja 17 05	3 ,12+ 4-,18	Foley	Kent, England	12L			402	5*	B
1428	2/14-/76 15	2335-0053	"	"	Blue haze on E. side & red haze on W. side. At 0010h details were more clear & at 0024h Aris. & Herod. were separated. At 0034h colors were gone. At 0035h blue was on Aris. & the area was bright, but was black in a red filter. At 0053h features were clear, color gone, & albedo decreased to 9. (color not due to temp. inversion ?because of being dark in red filter, implying a medium).	Ja 20 13 F 17 10	F 05 13	59 46 60 41 54 08 59 53	1.25 h	14.7	.91	85 38R	-0.7 F 14 17		LeCroy	Springfield, Virginia	4.5L,75×	S=6 T=4.5	ALPO+ LTP prog.	pc	1	V,B,G
1429	3/ 3/76	1730-1830	"	"	Point-like brightness--white.	F 17 10 Mr 16 19	Mr 04 04	60 41 61 19 54 00 54 01	1 h	2.7	.48 .54	301 106R	-12.4 Mr 16 03	4+,32 ms ?	Classen ?	Budapest, Hungary	8R,14L			403	3	B
1430	3/12/76	2100 ?	Pico	9W, 45N	A ray seen extended fr. mt. in SW(IAU ?) direction--likened to a hockey stick. (not seen in Pickering's photo atlas at col. =53°).	"	"	" " 59 06		11.8:	.89:	51: 42:R	-3.3: Mr 16 03	5-,31 ms ?	Findlay	England ?				407	3*	B
1431	4/ 4/76	1936-2009	McClure vicinity	54E, 14S	Noted a fuzzy, glowing spot at 1936h at 160×. 2 min. later, spot grew larger & flashed up to very bright. Changed power to 106×, & 80×, still vis. Spot faded 10 m later, then suddenly flashed up again. 5 m later it faded again & disappeared at 1959h. At 2006h returned to fuzzy, glowing spot then disappeared at 2009h, never to reappear. Some obs. confirmed, others did not. Photos afterward don't show anything, nor did blink afterward.	Mr 16 19 Ap 14 07	Mr 31 10	61 19 61 26 53 56 54 56	1/2 h	5.1	.67	332 26R	-9.7 Ap 14 12	5+,33- ms ?	McKay, Savill, Moore, Buss, Brady, Ross, Foley	Sussex, Eng. Kent, Eng.	3R,160× 10×50binoc 15L,360× 6L,120× 8L, 12L	S=II		404	5*	G,B
1432	6/ 6/76	0201	Eratosthenes	12W, 14N	Bowl was full of shadow but a small 5° bright spot on NE floor. Nothing seen in 1975 at nearly same col. but shadow was deeper.	My 12 17 Je 09 19	My 25 00	61 03 60 19 54 04 59 06		8.0	.86	12 0R	-6.2 Je 12 04	2+,16+	Bartlett	Baltimore, Maryland	3R,54-300×	S=5 T=5		pc	4*	B
1433	6/ 8/76	0137	Proclus	46E, 16N	C.p. very difficult to see, =3° while fl. is 2°. (normal albedo of c.p. =5°).	"	"	" " 60 00		10.0	.94	36 82R	-4.2 Je 12 04	3 ,17	"	"	"	S=5 T=2		"	4*	D
1434	6/10, /76 11	0207	"	"	C.p. invis. (=2° ?), floor =2°. Still invis. on 11th. (c.p. normally 5°).	Je 09 19 Jy 07 02	Je 21 17	60 19 59 31 54 12 60 18 60 06		12.0 13.0	.01, .05	61 107R, 73 119R	-2.1, -1.1 Je 12 04	3-,11, 5+,30 ms ?	"	"	4.5L40-225×	S=4-3 T=3 hazy		"	4*	D
1435	6/12/76	0521	Aristarchus	47W, 23N	Deep viol. tinge in N. 1/2 of nimbus. Faint blue-viol. radiance (gas ?) on E.-NE wall along crest. No color elsewhere, nor on plateau m.	"	"	" " 59 39		14.1	.05	87 40R	0.0 Je 12 04	3-,14+	"	"	"	S=5 T=3		"	4*	V,G
1436	6/20/76	0757	Eratosthenes	12W, 14N	Floor covered with shadow & c.p. seen as 5° bright spot. Another minute spot 5°bright on SE floor in shadow. (only low hills on floor in SE, spot on terrace ?).	"	"	" " 54 21		22.2	.38	186 6S	+8.1 Je 12 04	2 ,11	"	"	" ,40-450×	S=6.5 T=4-3		"	4	B
1437	7/ 6/76	0135	Proclus	46E, 16N	Nothing vis. on floor(albedo = 2° ?). (usually features are vis.).	"	"	" " 59 28		8.5	.96	18 64R	-5.5 Jy 11 13	3 ,12	"	"	"	S=6 T=3		"	4	D
1438	7/10/76	0215	"	"	" " " " "	Jy 07 02 Au 01 04	Jy 19 11	59 31 59 24 54 16 58 54		12.5	.12	68 114R	-1.4 Jy 11 13	2+,12+	"	"	"	S=5 T=4-0		"	4	D
1439	8/ 4/76	0207	Eratosthenes	12W, 14N	Faint spot of light, 4°bright seen in shadow in pos. of c.p. which is normally invis. At base of inner NW wall a faint bluish radiance (gas ?) was observed.	Au 01 04 Au 28 02	Au 16 06	59 24 60 09 54 13 59 02		7.9	.10	13 1R	-5.9 Au 10 00	2+,10+	"	"	"	S=6 T=3		"	4*	B,V,G
1440	8/ 5/76	0042	Proclus	46E, 16N	C.p. barely vis., 2.5°, floor=3°, Proc. A =6°, C=4°, D=4°--dull. SSW & SE walls dull, =4°. (c.p. normally 5° when vis.).	"	"	" " 58 47		8.9	.14	24 70R	-5.0 Au 10 00	3-,11	"	"	"	S=5-3 T=4		"	4	D
1441	8/11/76	0644	Aristarchus	47W, 23N	Pale viol. radiance (gas ?) on plateau m. Dark viol. tinge on nimbus. C.p. = 10°, walls = 8°, & all of floor = 8°. W. wall out of focus due to haziness (gas ?).	"	"	" " 55 51		15.2	.37	101 126S	+1.3 Au 10 00	2+,10	"	"	" ,45-300×	S=4-3 T=4		"	4*	V,G

No.	Date	UT Time	Feature	Selenographic Coordinates	Phenomena Description	Perigee Dates	Apogee Date	Horizontal Parallax	Duration	Age	ϕ_N, d	Colong, Term. Dist, °	Days fr FM & nr. FM d, h	Solar K_p, ΣK_p	Observer	Location	Telescope	Seeing	Inform Source	App. Ref.	Wt	Phenom. Type
	m d y	h m		λ , β		m d h	m d h	π_p , π_s , π		d	d	°	m d h	K_p, ΣK_p			Ap K Pw					
								1900A.D.														
1442	8/12,/76 13	0730	Aristarchus	47W 23N	Nimbus around c.p. = 2°, S. floor = 6° & was red; rest of floor = 8°. (This is only his second occasion of seeing a reddish tint in Aris.). Tonite saw a pale red glow suffusing the S. region of the crater. Bright blue radiance (gas ?) on ENE wall. Viol. radiance on plateau m gone tonite. Red glow gone on 13th & the region was yellow-brown.	Au 01 04 Au 28 02	Au 16 06	59 24 60 09 54 13 55 18		16.2	.42	113 114S	+2.3 Au 10 00	2-, 7-, 2 , 6-	Bartlett	Baltimore, Maryland	4.5L,45- 225×	S=6-3 T=5		pc	4*	D,R, G,V
1443	8/13-/76 14	2050-0100, 0315	Pico	9W, 45N	Dark line to E. (IAU ?) of Pico obs. & persisted till 0100h. On the 14th the whole area around Pico was gray & diffused. At 0315h detail reappeared & NW corner sparkled. Small brilliant spot appeared due N. of it & the albedo exceeded Aristarchus. (= 9° ?).	"	"	" " 54 37	7 h	17.7	.48	144 45S	+3.8 Au 10 00	2 , 6-, 2+, 8+	Foley ? or Findlay ?	England		S=E		407	3*	D,G,B
1444	8/15/76	2300-2345	Aristarchus	47W, 23N	Noted blue color on N. wall extending toward Herod. Also saw orange color in S. region. Confirmed by father. (similar to many of Bartlett's rept's.). Moore noted nothing unusual at 2320h.	"	"	" " 54 14	3/4 h	19.9	.49 .55	158 69S	+6.0 Au 10 00	1 , 4+	Garbett (2), Moore	Bedfordshire, Sussex, England	10L,500× 15L,360×	S=I S=IV		405	4	V,R
1445	8/18/76	0612	Eratosthenes	12W, 14N	Again, c.p. is vis. within shadow but much brighter than on Aug. 4, (4°) & similar to June at same col. The 2nd bright spot seen in June was not seen tonite. (roughness on walls seen on LO IV & V pics show why these pseudo-shadows appear).	"	"	" " 54 33		22.2	.63 .64	186 6S	+8.3 Au 10 00	2-, 9	Bartlett	Baltimore, Maryland	4.5L,25, 225×	S=6 T=3-2		pc	4	B
1446	8/21/76	0840	Herodotus	48W, 22N	Pseudo peak seen as 5° bright spot lying on diagonal dark band that crosses the floor from NE to SW & becomes vis. only at low sun. Never saw the pseudo peak in afternoon before--usually vis. only nr. sunrise. (this would be expected if it is a low hill as seen on Apollo oblique pics). Other times c.p. seen were May 11 (6°), June 10 (13°), Sep 6(8°), Sep 7 (21°) & Sep 19 (10°) solar altitudes. (21° seems too high a slope for the hill).	"	"	" " 56 21		25.2	.75	224 4S	+11.3 Au 10 00	3-,15	"	"	" ,45- 300×	S=4-3 T=5		"	4	B
1447	9/ 1/76	0040	Menelaus	16E, 16N	Upper 1/2 of W. wall bright white(8°). Lower 1/2 much duller at 4° & distinctly bluish-gray. Same as seen in Aris. & Grimaldi & thinks it is due to local agency . (gas ?)	Au 28 02 S 25 03	S 12 23	60 09 60 56 54 06 58 56		6.5	.14	354 10R	-7.5 S 08 13	3 ,19-	"	"	"			"	4*	B,D,V
1448	9/ 4/76	0235-0335	Plato	9W, 51N	At 0235h albedo of floor was est. at 3. At 0325 the pt. was albedo =1, 2 whole steps darker than earlier & noticeable to the obs. 10-15 min later it returned to normal. (the few meas. of albedo for this age were 1.5-2 which suggests that the meas. of 3 was the anomalous one. Another pt. did darken--as reported).	"	"	" " 57 16	10 m	9.6	.25	320 33R	-4.4 S 08 13	3+,23	Porter	Narragansett, Rhode Island	6L,100×	S=5 T=4 3sBU 4s Exc	ALPO-TP prog.	pc	3*	B,D
1449	9/ 5-/76 6	1845-0135	Aristarchus	47W, 23N	Viol. hue on crater on W. wall, especially NW corner seen by Prout & 2 Foleys. Moore & Spry did not see color. All obs. noted that the crater was dull, < Tycho or Proc. At 2140h all noted it was brighter & now brightest on moon. Color disappeared at 2143h. (30-40% incr. in bright.).	"	"	" " 56 22		11.3	.31	53 6R	-2.7 S 08 13	4 ,17, 3 ,14+	Prout, Foley (2) Moore, Spry	England ? " Sussex, Eng. England ?	12L " " "	S=III-II	Bo	pc, 411, 412, p302	1, 5*	V,D
1450	9/ 6/76	0200	Proclus	46E, 16N	Nothing vis. on floor of 2° brightness. Usually c.p., floor ray & Proc. A are vis. at this col. & c.p. is 5° bright. (must have been 2° tonite).	"	"	" " 56 16		11.6	.32	56 101R	-2.4 S 08 13	3 ,14+	Bartlett	Baltimore, Maryland	4.5L,45- 300×	S=3 T=5		pc	4*	D
1451	9/ 8/76	0205	"	"	C.p. vis. & 5° bright. Proc. A has reappeared, = 6°, & Proc. C, D, M, & N (floor spots) were all vis. 10° bright spot seen on N. wall crest. This NWBS is an occasional & erratic feature not related to fixed col.	"	"	" " 55 21		13.6	.39	80 126R	-0.4 S 08 13	3-,15-	"	"	4.5L,45- 225×	S=5-3 T=5		"	4	B

No.	Date (m d y)	UT Time (h m)	Feature	Selenographic Coordinates (λ, β)	Phenomena Description	Perigee Dates (m d h)	Apogee Date (m d h)	Horizontal Parallax (1900 A.D.)	Duration	Age (d)		Coleng. Term. Dist.	Days fr. FM (m d h)	Solar	Observer	Location	Telescope	Seeing	Inform. Source	App. Ref	Wt.	Type
1452	9/ 8/76	0429	Eratosthenes	12W, 14N	Pseudo-shadow X_3 was present but X disappeared from wall (same intensity ?) which was rated 4°. Disappearance of X so unexpected that he examined inner S. wall very carefully & was certain it was free from pseudo-shad. Had vanished within 24h. Other pseudo-shadows showed no change. X reappeared next nite. (X must have been 4° &this is much higher than any other meas.). Variability of wall shadows may have been what Pickering saw, suggests Bartlett.	Au 28 02 S 25 03	S 12 23	60 09 60 56 54 06 55 18		13.7	.39	82 69R	-0.3 S 08 13	3-, 15-	Bartlett	Baltimore, Maryland	4.5L, 45-225×	S=5-4 T=5		pc	4*	B
1453	9/14/76	0424	"	"	Pseudo-shadow F disappeared & wall here is same intensity as whole inner crater wall, = 4°. No change in X, X_3 or X_2. (4° is much brighter than normal).	"	"	" " 54 12		19.7	.61	155 37S	+5.7 S 08 13	3 , 19-	"	"	4.5L, 45-300×	S=6 T=3 hazy		"	4*	B
1454	10/ 4/76	2209-2300	Gassendi	40W, 16S	Vivid red spots & general red color seen around rim by 2 obs. At 2209h blood red small area was seen. 1 h later the most westerly (IAU ?) of the peaks had become hazy while all other areas were sharp. (Indep. confirm.).	S 25 03 O 23 13	O 10 12	60 56 61 24 53 51 55 18	1 h	11.1	.34	48 8R	-3.3 O 08 05	2+, 13+	Robinson, Foley	England "				407	5*	R, G, B
1455	10/18/76	0742	Aristarchus	47W, 23N	Inner E. wall 6° with very large EWBS at 8°. No viol. color anywhere & floor was gray at 4°. (very low). C.p. is only 8°. At base of c.p. between peak & advancing shadow a very faint but definite red glow was seen. It was also seen later in the 3-in refr. Was confined to W. base of peak & no color on E. base tho carefully searched for. This red glow was unique in his experience of 25 yrs. He obs. thru col. 223° but saw nothing more unusual.	"	"	" " 57 56		24.5	.82	211 16S	+10.1 O 08 05	5-, 26+ ms ?	Bartlett	Baltimore, Maryland	4.5L, 45-225×, 3R	S=3 T=5		pc	4*	D, R
1456	11/11/76	0326	"	"	All of floor & walls 8° bright. SWBS enormously developed & 9° bright--diff. fr. '54 obs. at 140°col. when it was absent. Viol. on outer nimbus & faint blue-viol. radiance (gas ?) on ENE rim. This too was diff. from other obs. at same col.	O 23 13 N 21 01	N 06 15	61 24 61 20 53 58 54 53		19.0	.66	141 86S	+4.2 N 06 23	5 , 28+ ms ?	"	"	", 45-150×	S=5-3 T=4		"	4*	B, V, G
•1457	11/13/76	0525	"	"	Floor 8° except S. =6° which is also granulated & is pale yellow. Different aspect fr. other obs. at same col. Viol. in outer nimbus. Bright blue-viol. glare where viol. radiance was on 11th. SWBS still large & 9° bright.	"	"	" " 56 00		21.0	.73	166 61S	+6.2 N 06 23	5 , 33+ ms ?	"	"	3R, 54-200×	S=5 T=4		"	4	D, R
1458	11/14/76	0609	"	"	Walls & floor 8° except S. =6°. SWBS now smaller but still 9°. S. floor still granulated & now yellow-brown. Strong viol. tint still on outer nimbus but now viol. radiance (gas ?) again on ENE rim as on 11th, but not as on 13th.	"	"	" " 56 45		22.1	.76	179 48S	+7.3 N 06 23	4 , 24-	"	"	3R, 54-300×	S=5-4 T=5		"	4	D, R, V, G
1459	11/16/76	0815	"	"	Crater very dull except EWBS =9° & large. W. glacis =5° & inner E. wall 6°. Floor is dull 5°, c.p. =10°. SWBS has disappeared. No viol. anywhere.	"	"	" " 58 31		24.2	.84	204 23R	+9.4 N 06 23	2 , 11+	"	"	"	S=4 T=5		"	4	D, B
1460	1/ 4/77	1625-1730			Observed unusual processes on moon. Activity in progress at beginning of obs. Still vis. at 1710h, gone at 1730h. Latham & colleagues found no seismic activity at that time under a quick look.).	D 19 12 Ja 16 10	D 31 09	60 45 59 50 54 08 55 13	1 h	14.6	.58	84	-0.8 Ja 05 12		Kozyrev	Pulkovo Obs. Crimea, Russia				"	4*	G ?
1461	1/31/77	2040-2300	Promontory LaPlace	25W, 46N	With filters in eyepiece, tho't he saw a possible darkening in the blue but no variation in red. Altho a deep shadow is normal to the W. of the cape at this period. (then cape must have a slope> 30°!). He wondered if shad. was more extensive than usual ? Prout noted a dark inky coma-shaped spot. Dundee obs. concluded it was a shadow. Took photos. Analysis of them was underway at time of rep't.	Ja 16 10 F 11 04	Ja 28 06	59 50 59 13 54 14 55 16	2.5 h	12.3	.60	55 30R	-3.3 F 04 04		Foley, Prout, Findlay, Ford, Mooney	England, " Dundee, Scot. " "	11.75L, 360× 4R ?or L ? 10L, 180-350×	S=III S=VG		407	5*	R, G, D
1462	1?/ /77 or 2?/ /77		Manilius	8E, 14N	Photo taken showed area covering many kms discolored in blue. Shape seemed irreg. & no other place on moon showed any anomaly. (date not given, but was earlier than March).										Smith	Cookham, England ?	8.5L			407	5*	V, G
1463	5/28/77	2300 ? late at nite	Gassendi	40W, 16S	Possible LTP--Hedley-Robinson alerted Ford & Amery who obs. but could not confirm or deny, due to conditions.	My 04 05 Je 01 15	My 18 18	31 18 61 25 53 56 59 29:		10.8:	.87	42: 2:R	-3.9: Je 01 21		Robinson, Ford, Amery	England, Dundee, Scotland	10L			408	3*	

National Aeronautics and
Space Administration

Goddard Space Flight Center
Greenbelt, Maryland 20771