

Lunar Meteor Opportunities, Annual Showers 2005-2061

(Note: This material is from Chapter 7 and Appendix F of “An Observer’s Guide to Lunar Meteoritic Phenomena”) Favorable viewing geometries of the major meteor showers through the year 2061 are shown in gray boxes with bold values indicating number of days past new moon. This table was constructed by Peter S. Gural and has given permission for its reproduction.

Year	Year	Year	QUA Jan 4	ETA May 6	CAP July 30	PER Aug 13	STA Nov 6	LEO Nov 18	GEM Dec 14
2005	2024	2043	22	27	24	7	4	16	13
2006	2025	2044	4	8	5	19	15	27	24
2007	2026	2045	15	18	15	0	26	7	4
2008	2027	2046	26	1	27	11	7	19	16
2009	2028	2047	6	12	9	21	18	1	27
2010	2029	2048	18	22	19	4	29	11	8
2011	2030	2049	29	3	29	14	10	22	19
2012	2031	2050	10	14	11	25	21	4	1
2013	2032	2051	21	26	23	6	2	15	12
2014	2033	2052	3	7	3	18	14	25	22
2015	2034	2053	14	17	14	28	24	6	3
2016	2035	2054	24	28	25	9	5	18	14
2017	2036	2055	5	10	7	20	16	29	26
2018	2037	2056	17	21	17	2	28	9	6
2019	2038	2057	28	2	28	13	9	20	17
2020	2039	2058	8	13	10	23	19	2	29
2021	2040	2059	19	24	21	5	1	13	10
2022	2041	2060	1	5	2	16	12	23	20
2023	2042	2061	12	16	12	27	23	5	2

This table provides an easy means by which to determine the favorable observing geometries for the Quadrantids, Eta Aquarids, Capricornids, Perseids, Southern Taurids, Leonids, and Geminids. The table takes advantage of the repeatability of the lunar phase to within a day every 19

years. Best observable periods for meteor showers fall within two ranges: a week near first quarter (moon phase is 3 to 10 days old) and again near last quarter (moon phase is 19.5 to 26.5 days old). In the table favorable geometries are shown as bold numbers (days past new moon) within gray boxes. All the showers listed in table 2 have observable impact regions for both the first and last quarter except the Leonids and the Eta Aquarids (first quarter only).

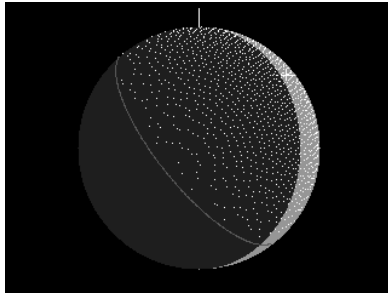
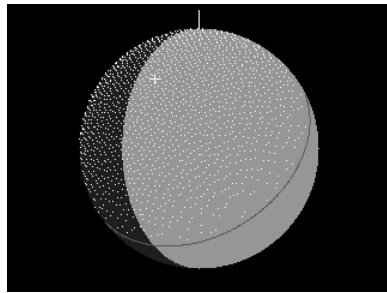
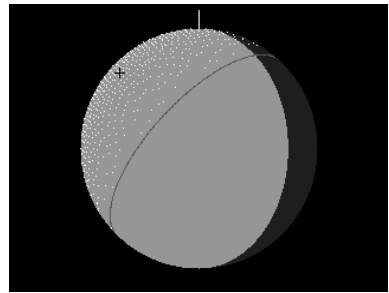
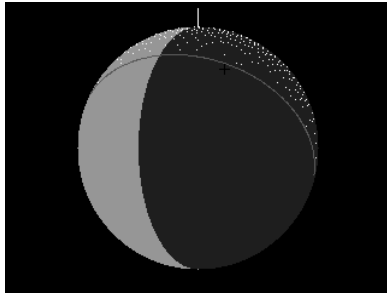
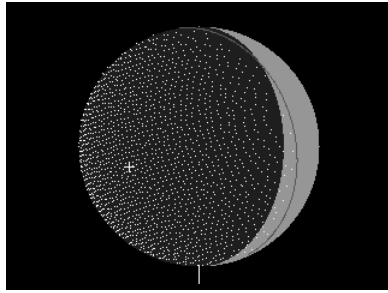
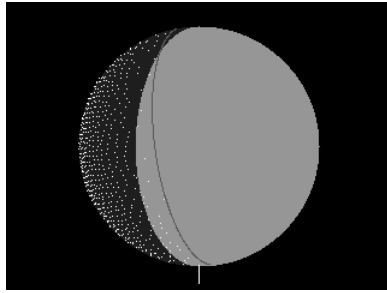
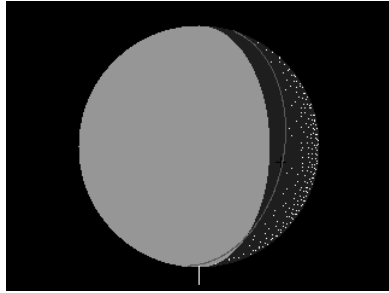
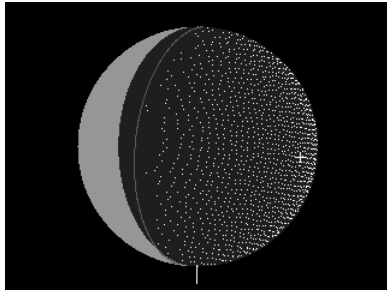
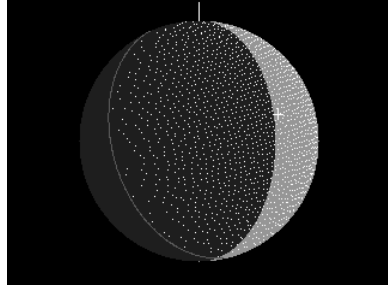
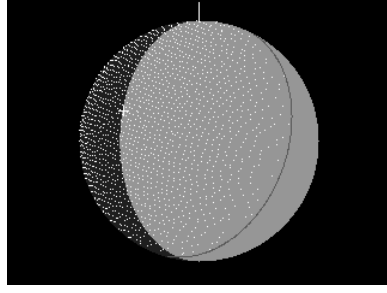
As the geometry changes are not very significant around each meteor shower's observable dates, one can generalize the focus regions on the non-illuminated face for telescopic video observations (see table 7-2). More detailed plots of the observable regions for each major meteor shower are shown at the end of this chapter.

Best regions on the non-sunlit surface of the lunar near side to direct a telescopic impact survey (avoiding the bright limb in the field of view).

Meteor Shower	Maximum Date	Near First Quarter	Near Last Quarter
QUA	January 4	Northeast Quadrant	Northwest Quadrant
ETA	May 6	Central Region	Not Observable
CAP	July 30	Eastern Half	Western Half
PER	August 13	Northeast/Central Region	Northwest Limb
STA	November 6	Eastern Half	Western Half
LEO	November 18	Eastern Half	Not Observable
GEM	December 14	Eastern Half	Western Half

Impact Plots

	3 Days Past New Moon	10 Days Past New Moon	19 Days Past New Moon	26 Days Past New Moon
QUA				
ETA				
CAP				
	3 Days Past New Moon	10 Days Past New Moon	19 Days Past New Moon	26 Days Past New Moon

PER				
STA				
LEO				

	3 Days Past New Moon	10 Days Past New Moon	19 Days Past New Moon	26 Days Past New Moon
GEM	