

Table 8. VEI ≥ 5 volcanic eruptions in 1600–2017 with the month known versus syzygies.

Date, volcano, VEI	Pertinent and possibly pertinent events	ν
2012/7/18-19 Havre VEI=5	2012/7/19 4:25 New Moon, coincided with a considerable drop in cosmic ray activity and preceded powerful 2012/7/23 CME	1
2011/6/3-4 Puyehue VEI=5 seismic activity started 2011/6/2	2011/6/1 21:03 New Moon	2
1991/8/8-12 Hudson VEI=5	1991/8/10 New Moon, 1991/7/11 New Moon-closest perigee	0
1991/6/15 Pinatubo VEI=6	1991/6/12 New Moon, 1991/7/11 New Moon-closest perigee 1991/6/1 -1991/6/15 five X12.0 solar flares	0
1982/5/27-28 El Chichon VEI=5 and 1982/4/3-4, 1982/3/29	1982/6/21 New Moon-2nd closest perigee 1982/4/8 Full Moon, 1982/3/25 New Moon	0
1980/5/18 8:32 St.Helens VEI=5 seismic activity started 1980/3/15	1980/5/14 12:02 New Moon, 22 hours short of $\nu = 3$ 1980/3/16 New Moon-2nd closest perigee	≥ 4
1963/3/17 Agung VEI=4-5	37 days before 1963/4/23 New Moon-2nd closest perigee 4 days short of $\nu = 3$	≥ 4
1956/3/30 5:10 Bezymianny VEI=5	1956/3/26 13:11 Full Moon, 6 hours short of $\nu = 3$ 1956/2/24 powerful solar storm	≥ 4
1933/1/8 Kharimkotan VEI=5	1933/1/11 20:36 Full Moon	3
1932/4/10 Cerro Azul VEI=6	1932/4/20 Full Moon-closest perigee	0
1913/1/20 Colima VEI=5	1913/1/22 Full Moon, 1913/2/21 Full Moon-closest perigee	2
1912/6/6 Novarupta VEI=6	38 days before twin pair of syzygy-perigees on 1912/7/14 and 1912/8/12, 5 days short of $\nu = 3$	≥ 4
1907/3/28 Ksudach VEI=5	1907/3/29 Full Moon	1
1902/10/24 Santa Maria VEI=5-6		≥ 4
1886/6/10 Tarawera VEI=5		≥ 4
1883/8/27, morning local time Krakatoa VEI=6	1883/9/1 14:13 New Moon 1882/11/ powerful geomagnetic storm	≥ 4
1875/3/29 Askja VEI=5		≥ 4
1854/2/18 Shiveluch VEI=5		≥ 4
1835/1/20 Cosiguina VEI=5		≥ 4
1822/10/8 Galunggung VEI=5	1822/11/29 Full Moon-closest perigee	≥ 4
1815/4/10 Tambora VEI=7	1815/4/9 18:23 New Moon	0-1
1808/12/ exact date is unknown but was prior to 1808/12/11, exact location is unknown, VEI=6, 1–25 days after 1808/11/17 New Moon-2nd closest perigee		0
1793/2/ exact date is unknown, Alaid VEI=5, 19–47 days after 1793/1/12 New Moon- closest perigee, the average of 19 and 47 is 33, which gives $n = 3$ as the most likely value		3
1783/6/8 Laki VEI=4-5	1783/6/15 Full Moon-closest perigee	0
1755/10/17 Katla VEI=5	1755/11/4 New Moon-closest perigee	0
1739/8/19 Tarumai VEI= 5	1739/7/20 Full Moon-closest perigee	0
1721/5/11 Katla VEI=5	1721/6/10 Full Moon-closest perigee	0
1707/12/16 Fuji VEI=5	1707/12/9 Full Moon-closest perigee	0
1673/5/20 Gamkonora VEI=5	1673/5/16 11:09 New Moon	≥ 4
1667/9/23 Tarumai VEI=5	middle of Maunder Minimum	≥ 4
1663/8/16 Usu VEI=5	1663/8/18 20:15 Full Moon	2
1640/12/26 Parker VEI=5	1640/12/28 7:24 Full Moon	2
1640/7/31 Komaga-take VEI=5	1640/8/1 20:48 Full Moon	1
1631/12/16 Vesuvius VEI=5		≥ 4
1630/9/3 Furnas VEI=5	1630/9/7 New Moon-2nd closest perigee	0
1625/9/2 Katla VEI=5	1625/9/1 New Moon, 1625/8/18 Full Moon-2nd closest perigee	0
1600/2/17 Huaynaputina VEI=6	1600/2/14 17:31 New Moon	3
For the VEI=5 eruptions of Azul Cerro in 1916, Agung in 1843, Tangkoko-Duasudara in 1680, Sheveluch in 1652, Raung in 1593, Kelut in 1586, and VEI=6 eruptions of Long Island in 1660 and Billy Mitchell in 1580 \pm 20, no conclusion can be made as only the year of the eruptions is known.		

Note: The table was compiled by combining together all eruptions in 1600 - 2017 listed as VEI ≥ 5 in at least one of the following: Smithsonian Institution's data base http://volcano.si.edu/search_eruption.cfm; Bradley, R. S., Jones, P. D, Records of explosive volcanic eruptions over the last 500 years, *Climate since 1500 AD*, 1992, <http://www.geo.umass.edu/faculty/bradley/bradley1992b.pdf>; NOAA's data base <https://www.ngdc.noaa.gov/nndc/struts/form?t=102557&s=50&d=50>; <http://www.mysterylife.ru/prirodnye-katastrofy/vulkany/vulkan-bezymyannyj> to determine the exact time of 1956/3/30 Bezymianny's eruption; personal communication with Dr. Rebecca Carey, University of Tasmania regarding the 2012 Havre eruption. Lunar phases and perigees are due to <https://www.fourmilab.ch/earthview/pacalc.html>, while the information about solar flares and geomagnetic storms is due to <http://adsabs.harvard.edu/full/19600bs...80..149E>, <http://www.solarstorms.org/SRefStorms.html>, <https://www.nature.com/articles/187926a0>, <https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/JZ065i012p04200>. Cosmic ray data is due to <http://cr0.izmiran.ru/mosc/>.