

Collisional Velocity Dependence of Lunar Impact Flash

Masahisa Yanagisawa[1]; Kengo Haruta[1]

[1] Univ. Electro-Communications

<http://www.ice.uec.ac.jp/member/yanagi1.htm>

About twenty optical flashes on the night side of the Moon have been confirmed since 1999. All of them happened during the Leonid meteor shower activity and are attributed to the high velocity impact of Leonid meteors. It is interesting to note that no reliable detection has been made during the other period of a year. Collisional velocity of the Leonid meteors is higher than that of any other meteors. High kinetic energy of Leonid meteors due to the high velocity would cause bright impact flashes. Moreover, the kinetic energy may be transferred to the optical radiation energy more efficiently in the higher velocity impact of the Leonid Meteors. We report the results of our search for Lunar Impact Flash during the non-Leonid periods, and discuss the importance of high collisional velocity.