

The Geminid Campaign – A Practice Run for the LUMIO Mission

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The ESA CubeSat LUMIO mission, due to launch in 2028, will be monitoring the far side of the Moon from the L2 Lagrange point, for lunar impact flashes (LIFs). As part of citizen science outreach, the LUMIO team will be asking amateur astronomers to video earthshine on the near side so that impact rates on the near and far side can be compared, and for a few LIFs on the edge of the Moon, to study these from different viewing angles. As a test run, amateur astronomers were asked to participate in the lunar Geminid campaign which ran from Dec 12-14 2025. 27 observers took part, just under sixty hours of observations of earthshine were made, of which approximately ten hours of this observing overlapped. Approximately twenty candidate LIFs were detected for which we have high certainty and one event was witnessed by six observers simultaneously. A second campaign was conducted during the Artemis-II mission to see if Earth-based observers could confirm candidate LIFs that the astronauts saw visually. A third campaign for the Lyrids will take place from Apr 21-23rd 2026.

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