

Analysis of Meteor Light Curves from LO-CAMS Detections

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The Lowell Observatory Cameras for All-sky Meteor Surveillance (LO-CAMS) located in northern Arizona is a part of the CAMS network with four 16-camera stations running autonomously every night. A few hundred meteors are detected each night from LO-CAMS for which triangulated trajectories and pre-impact heliocentric orbits are determined. For each detection we also obtain light curves of time versus intensity sampled at a cadence of 1/30th of a second. We dynamically classify the meteors into two populations: shower meteors, referring to those associated with a known meteor shower and a presumed cometary parent body, and sporadic meteors as those that are not associated with a known shower. The light curves are classified based on parameters such as duration, F parameter (Brosch, N., et al. (2004)), amplitude, leading and trailing slope, and integrated intensity of the detection. To date, we have analyzed over 6000 meteors detected from January 3, 2019 to March 24, 2019. We plan to expand our analysis to include LOCAMS-detected meteors dating back to 2017.