

Characterizing the daytime Taurid meteor showers

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The autumn Taurid showers and the meteoroid complex that gives rise to them are well known and have been the subject of a significant amount of research. However, the daytime showers produced by the same meteoroid complex (the Beta Taurids and Zeta Perseids) have received much less study owing to the challenges of observing during daylight. We used the Canadian Meteor Orbit Radar (CMOR) to observe these showers and characterize their activity and orbits. Between 2011 and 2018, CMOR recorded 4,439 Beta Taurids and 10,585 Zeta Perseids for which orbits could be determined. The mean radar orbit is found to be significantly smaller in semi-major axis than optically-derived orbits of the nighttime showers. No substantial variation in orbital parameters was observed over the duration of the shower.