



Ablation and drag modelling of meteors and bolides

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Abstract

An analytical model describing meteoroid's entry into an atmosphere is considered. The study takes an approach that models the fireballs' mass and other properties based mostly on the rate of body deceleration in an atmosphere, which also provides us a good link for better understanding accompanying radiation processes. The model is fitting to the actual data of observations, by selecting key non-dimensional parameters describing drag, ablation and rotation rate of meteoroid along the luminous segment of the trajectory. Thus we allow a change of body shape during its motion in the atmosphere.

