

Meteor “Hurricanes” and Possible Behavior of Parent Bodies

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Meteor “hurricanes”, the extremely strong meteor storm, tend to be buried in history due to extremely short duration. We studied several independent witnesses on such possible meteor “hurricanes”, and found a certain example occurred in the fall of 1933. The event was witnessed by two independent persons in Hakodate, Japan. The display continued for only a few minutes at a level of HR more than one million, which made the ground visible. The radiant point was thought to be located at the southern sky. Namely, it is different from October Draconids, which also showed strong display in 1933. We could not identify any related comets or meteor showers. Three possible origins of the swarm of the meteoroids caused this storm is considered. One is the meteoroids of 0-revolution trails in case of the regular ejection from the alive parent body. Other is the extreme meteor cluster caused by the fragmentation of a large meteoroid, which should have occurred at a certain time before the Earth’s impact. The third one is the disintegration of the parent body itself, just before the close approach to the Earth, and the produced meteoroids as 0-revolution trail. In this paper we introduce the result of our studies on this unique event in 1933.