

Lighting-induced bremsstrahlung X-rays observed near the leader.

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Energetic radiation, bremsstrahlung X ray in energy range of gamma ray, associated with lightning activities and thunderstorm have been reported. The lifetime of lightning-generated X rays, termed short burst, is in the order of millisecond. These X rays are considered to be generated by bremsstrahlung along the leader, termed short burst. During the winter, the bright short burst with more than 100 millisecond duration was detected on 4 Dec. 2015. In this analysis , we compare radiation data with VLF lightning location data and high speed camera data.

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