

Origin of summer-thunderstorm-induced energetic radiation

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We conducted the radiation and atmospheric electric field measurements at the summit of Mt. Fuji during the summer of 2013 and 2016. On July 26 and Aug. 5 of 2013 and Aug. 26 of 2016, the long burst of the energetic radiation was observed with 10 % enhancement. From the analysis of X-band MP radar, the radiation was observed in the dissipation stage of thunderstorm. In all the cases, negative electric field (upward direction) was observed with approximately -30 kV/m, which is not enough to cause relativistic runaway electron avalanche (RREA). Therefore, plausible radiation source might be around the positively charged area in the thunderstorm.

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