

UV FLASHES OF MILLISECOND SCALE FROM RED SPRITES AND GIGANTIC BLUE JETS

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The atmospheric electricity phenomena which can serve as a source for short millisecond range ultraviolet flashes are discussed. Analysis is based on the theoretical models of red sprites and blue jets earlier developed in collaboration with Yu.P. Raizer and G.M. Milikh. It is shown that UV flashes in the ms scale recently detected by "Tatiana" and FORMOSAT-2 satellites may be explained as generated by Gigantic Blue Jets (GBJ). The influence of an assumed self-consistent governing electric field in the GBJ streamer zone on the UV pulse shape and duration is revealed. It is also shown that red sprites can be a source for UV flashes with similar temporal profile, but at much lower intensity. Theoretically predicted radiation intensity dependencies on altitude for red sprites and GBJ are compared with available observational data.