

High-Speed Observation of Sprites and Elves from Space

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Satellite observation of sprites and elves is the most useful way to determine the occurrence frequencies and to obtain the spectral information of these luminous events. Space shuttle Columbia launched in 2003 demonstrated the importance of the space measurements. Tohoku University installed a high-speed array photometer at the Taiwanese satellite, ROCSAT-2, to detect the vertical motion of sprites and elves with two color filters. Past and future satellite programs relating to the measurements of the lightning-induced optical emissions are reviewed.