VLF OBSERVATIONS OF IONOSPHERIC DISTURBANCES IN ASSOCIATION WITH TLES FROM THE EUROSPRITE-2007 CAMPAIGN

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Two Very Low Frequency (VLF) AWESOME remote sensing systems located at Algeria (Algiers 36.45 N, 3.28E) and Libya (Sebha 27.02N, 14.26E) monitor VLF signal perturbations for evidence of ionospheric disturbances. The observations from Eurosprite-2007 campaign of sprites and elves are compared to collected VLF AWESOME data. The types of perturbations considered in this study are early/fast, early/slow, observed in 12-13, 17-18 October and 17-18 December, 2007. The results obtained from this study indicate that a one-to-one association between sprites and/or elves with early VLF perturbations is not in general exact, small early perturbations can occur in absence of TLE events. This is unlike the results reported by Haldoupis et al. [2004] on the one-to-one association between sprites and VLF disturbances during Eurosprite-2003 campaign. Moreover, a number of early perturbations were recorded by AWESOME systems at (Algeria and Libya) were not accompanied by sprites and/or elves observed by Eurosprites- 2007 cameras.

VLF signal perturbations, TLE, LEP

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