

Preliminary Analysis of IR Cloudtop Temperatures of Sprite Producing Storms over Argentina Observed from Brazil, and Comparison with US Case Study

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Sao Sabbas, F. T.; Pautet, P.; Taylor, M. J.; Pinto, O.; Thomas, J.; Solorzano, N.; Holzworth, R.; Bailey, M.; Schuch, N.; Michels, M.

We will present the preliminary results of the cloudtop temperature characteristics of two very active sprite- producing Mesoscale Convective System (MCS) which occurred over Argentina in the evening of February 22, and March 04, 2006. These were prolific storms, e.g. the first one produced more than 400 TLEs, including sprites, halos and possibly elves. The events were observed from the INPE Observatorio Espacial Sul-OES (Southern Space Observatory), located at the center of Rio Grande do Sul State, the most Southern State of Brazil. Except for the lack of triangulated locations for the sprites and halos recorded, the methodology used for this study is the same as for the paper Sao Sabbas and Sentman [2003], where a sprite producing storm over the central U.S. was observed during the night of July 22, 1996. We analyzed the IR satellite data provided by GOES-12 and the lightning information from the Brazilian Lightning Detection Network in combination with data from the World Wide Lightning Location Network WWLLN. We will also show a comparison between the obtained results and the results presented at the Sao Sabbas and Sentman [2003] paper. Sao Sabbas, F.T. and D. D. Sentman, Dynamical Relationship of IR Cloudtop Temperatures With Occurrence Rates of Cloud-to-Ground Lightning and Sprites, Geophys. Res. Lett., 30 (5), 40-1-40-4, 2003.

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