

**ELECTRON DENSITY DECREASE DURING GEOMAGNETIC STORMS OBSERVED
BY MEANS OF TWO DIFFERENT TECHNIQUES**

by

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ABSTRACT

Effects produced in the lower ionosphere by fifty magnetic storms were analysed from 1976 to 1987, using VLF propagation path - Argentina (43°S; 65°W)/Atibaia (23°S; 46°W). Comparison between frequencies of 13.6 kHz and 10.2 kHz showed well-defined propagation characteristics. Differences in electron density and ionization time for each region will be shown. Some storm effects occurred in 1981 were also analysed by means of a VLF/LF (20-60 kHz) oblique ionosonde operated by CTA/IAE, with the transmitter located in Paula Freitas (26°S; 51°W) and the receiver in Gaspar (26°S; 48°W). The results confirmed the increase of electron density in about 08-48 hours after the sc (sudden commencement) onset, and lasting from one to several days. On the other hand, some magnetic storms have shown a decrease in the electron density near the sc, effect not yet observed in this region.