

Equatorial F-region Responses to High Intensity Long-Duration Continuous AE Activity - HILDCAAs

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Experimental observations of disturbed responses of the equatorial ionosphere over the South American region due to intense episodes of High Intensity Long-Duration Continuous AE Activity - HILDCAAs, are presented and analyzed here using the following experimental data: 1. Ionospheric parameters h'F, hmF2 and foF2 obtained from ground-based Digisondes located in the Brazilian equatorial and low-latitude regions, 2. The auroral indexes AU, AL, and AE, and the Dst index, and 3. Interplanetary data from the Advanced Composition Explorer/ACE satellite orbiting around Lagrangian L1: north-south magnetic field component Bz, solar wind velocity VH, plasma temperature TH, and electric field. The data concerned here were gathered around the maximum solar activity epochs of 2000-2001.

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