

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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ABSTRACTS BOOK

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| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| High Energetic Solar Wind and Geomagnetic Storms at October November 2003 M. A. Mousalam Shaltout | 75 |
| High Speed Streams and the Earth's Quadrupole Cusp: Implications for Radiation Belt Enhancements R. B. Sheldon | 76 |
| 3D Radiation Belt Code, Feedbacks Between Acceleration Mechanisms and Loss Y. Y. Shprits ¹ , R. M. Thorne ² , B. Horne ³ | 77 |
| Local Time Variation of Horizontal Magnetic Field Disturbance During a HILDCAA Event V.M. Silbergli ¹ , A. L. Cilia de Gonzalez ² | 78 |
| Cosmic Ray Signatures due to Passage of Corotating Interaction Regions M. R. da Silva ¹ , E. Echer ² , F. L. Guarnieri ¹ , A. Dal Lago ¹ , L. E. A. Vieira ¹ , W. D. Gonzalez ¹ , N. J. Schuch ² | 79 |
| Equatorial F-region Responses to High Intensity Long-Duration Continuous AE Activity - HILDCAAs J. H.A. Sobral ¹ , M. A. Abdu ¹ , W. D. Gonzalez ¹ , A.L. Cilia de Gonzalez ¹ , B. T. Tsurutani ² , C. M. Denardini ¹ , J.G. Barbosa ¹ , D. C. S. Arnuda ¹ , C. J. Zamboni ¹ , F. L. Guarnieri ¹ | 80 |
| Ring Current Behavior as Revealed by Low Altitude Satellite and Ground Observations F. Sveras, M. Sarboj | 81 |
| Storm Electric Field Effects in the Low Latitude Ionosphere J. R. Souza ¹ , B. G. Fejer ² , M. A. Abdu ¹ , I. S. Batista ¹ , G. J. Bailey ³ | 82 |
| High Energy Electron Precipitation During Storms E. Spaanswick ¹ , E. Donovan ¹ , R. Friedel ² | 83 |
| A Unified Approach to the Distance Evolution of Velocity Differences in the Solar Wind R. Steinitz | 84 |
| A Statistical Study of the Occurrence and Zonal Drift Velocity Variations of the Plasma Bubbles with Geomagnetic Activity During Episodes of Corotating and Transient Solar Wind Streams P. M. Terra, J. H. A. Sobral, C. G. M. Brum, M. A. Abdu | 85 |
| Variability of Outer Zone Electrons During Recurrent Corotating Streams R. M. Thorne, Y. Y. Shprits | 86 |
| Corotating Solar Wind Streams and Recurrent Geomagnetic Activity: A Brief Summary B.T. Tsurutani ^{1,2} , N. Gopalswamy ³ , W.D. Gonzalez ⁴ , R.L. McPherron ⁵ , G. La ⁶ | 87 |