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Preface

The Inter Division Commission for Developing Countries (IDCDC) organized two sessions at the joint scientific assembly of the International Association of Geomagnetism and Aeronomy (IAGA) and International Association of Seismology and Physics of the Earth's Interior that took place at Hanoi, Vietnam during August 19–31, 2001. These sessions reviewed the latest developments and progress of equatorial electrojet studies since the IAGA designated International Equatorial Electrojet Year—IEEY was realized during 1992–1994. During the IEEY period the IAGA community had established observational networks and experimental facilities in the equatorial belt of Africa, Brazil, India and Vietnam. Geomagnetic and Aeronomy data were acquired using a variety of instruments such as, magnetometers, ionosondes/digisondes, VHF coherent back-scatter and incoherent scatter radars, optical interferometers, etc. Much of these experimental setups have been in continued operation and are generating multi-disciplinary data to study the electrodynamics of the equatorial electrojet and associated phenomena and their variabilities arising from solar and geophysical forcing, thus, providing new inputs for collaboration/integrated research in the field. Further, the availability of vector magnetic field from polar orbiting Ørsted and Champ satellites have given new dimensions to study the equatorial electrojet on global scale. The two sessions at the Hanoi were designed to cover emerging trends in all aspects of electrojet studies using data from ground and space. The papers in this volume cover empirical model of the electrojet, control of dynamo and magnetospheric sources to equatorial enhancement of magnetic variations, ionospheric irregularities, Spread-F dynamics, ionospheric electron density and electrical field soundings using in situ measurements from rockets, signatures of short-period gravity waves in night-glow measurements, ionospheric effects of magnetic storms, etc.

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