1. Record Nr. UNINA9910809174103321

Titolo	Midlatitude ionospheric dynamics and disturbances / / Paul M. Kintner Jr. ... [et al.], editors
Pubbl/distr/stampa	Washington, DC, : American Geophysical Union, c2008
ISBN	1-118-66655-0 1-118-67238-0 1-118-67171-6
Edizione	[1st ed.]
Descrizione fisica	1 online resource (338 p.)
Collana	Geophysical monograph series, , 0065-8448 ; ; 181
Altri autori (Persone)	KintnerPaul M
Disciplina	551.51/45
Soggetti	Ionosphere - Research Ionospheric storms Sudden ionospheric disturbances Space environment
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Title Page; Contents; Preface; Midlatitude Ionospheric Dynamics and Disturbances: Introduction; Section I: Characterization of Midlatitude Storms; Review and Overview; Ionospheric Storms at Mid-Latitude: A Short Review; The Mid-Latitude Trough-Revisited; Assimilation of Observations With Models to Better Understand Severe Ionospheric Weather at Mid-Latitudes; Low- and Middle-Latitude Ionospheric Dynamics Associated With Magnetic Storms; A Data-Model Comparative Study of Ionospheric Positive Storm Phase in the Midlatitude F Region; Recent Results High-Resolution Observations of Subauroral Polarization Stream-Related Field Structures During a Geomagnetic Storm Using Passive RadarIonization Dynamics During Storms of the Recent Solar Maximum; Mapping the Time-Varying Distribution of High-Altitude Plasma During Storms; Section II: Electric Field Coupling From the Heliosphere and Inner Magnetosphere; Review and Overview; Interplanetary Causes of Middle Latitude Ionospheric Disturbances; Ionospheric-Magnetospheric-Heliospheric Coupling: Storm-Time Thermal Plasma Redistribution; Recent Results

The Linkage Between the Ring Current and the Ionosphere SystemStorm Phase Dependence of Penetration of Magnetospheric Electric Fields to Mid and Low Latitudes; Relating the Interplanetary-Induced Electric Fields With the Low-Latitude Zonal Electric Fields Under Geomagnetically Disturbed Conditions; Simulation of PPEF Effects in Dayside Low-Latitude Ionosphere for the October 30, 2003, Superstorm; Impact of the Neutral Wind Dynamo on the Development of the Region 2 Dynamo; Section III: Thermospheric Control of the Mid-Latitude Ionosphere; Review and Overview
Global Modeling of Storm-Time Thermospheric Dynamics and ElectrodynamicsThermospheric Dynamics at Low and Mid-Latitudes During Magnetic Storm Activity; Disturbed O/N2 Ratios and Their Transport to Middle and Low Latitudes; Storm Time Energy Budgets of the Global Thermosphere; Recent Results; Sources of F-Region Height Changes During Geomagnetic Storms at Mid Latitudes; Neutral Composition and Density Effects in the October-November 2003 Magnetic Storms
Optical and Radio Observations and AMIE/TIEGCM Modeling of Nighttime Traveling Ionospheric Disturbances at Midlatitudes During Geomagnetic StormsSection IV: Ionospheric Gradients, Irregularities and User Needs; A Digest of Electrodynamic Coupling and Layer Instabilities in the Nighttime Midlatitude Ionosphere; Irregularities Within Subauroral Polarization Stream-Related Troughs and GPS Radio Interference at Midlatitudes; DEMETER Satellite Observations of Plasma Irregularities in the Topside Ionosphere at Low, Middle, and Sub-Auroral Latitudes and Their Dependence on Magnetic Storms
Optical and Radio Observations of Structure in the Midlatitude Ionosphere: Midlatitude Ionospheric Dynamics and Disturbances

Sommario/riassunto

Published by the American Geophysical Union as part of the Geophysical Monograph Series, Volume 181.Filling the need for a 20-year lag in substantial consideration of the midlatitude ionosphere, this volume focuses on work that takes advantage of GPS and UV imaging from satellites over the past decade, two methods that have profoundly transformed our understanding of this stratum of the atmosphere. Its interdisciplinary content brings together researchers of the solar wind, magnetosphere, ionosphere, thermosphere, polar and equatorial ionospheres, and space weather. Modeling and