

1. Record Nr.	UNINA9910460010303321
Titolo	Atmospheric turbulence, meteorological modeling and aerodynamics [[electronic resource] /] / Peter R. Lang and Frank S. Lombargo, editors
Pubbl/distr/stampa	New York, : Nova Science Publishers, c2010
ISBN	1-61728-264-2
Descrizione fisica	1 online resource (740 p.)
Altri autori (Persone)	LangPeter R LombargoFrank S
Disciplina	551.5501/5118
Soggetti	Atmospheric turbulence - Mathematical models Reynolds analogy Aerodynamics Electronic books.
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	""ATMOSPHERIC TURBULENCE, METEOROLOGICAL MODELING AND AERODYNAMICS""; ""ATMOSPHERIC TURBULENCE, METEOROLOGICAL MODELING AND AERODYNAMICS ""; ""CONTENTS""; ""PREFACE""; ""RESEARCH AND REVIEW STUDIES""; ""CLIMATOLOGY OF THE ARCTIC PLANETARY BOUNDARY LAYER ""; ""ABSTRACT""; ""1. INTRODUCTION ""; ""2. THEORETICAL STRUCTURE OF THE ARCTIC PBL ""; ""3. DATA SETS AND PROXIES ""; ""Pan-Arctic Data Sets ""; ""Maritime Arctic Regions ""; ""Central Arctic Regions ""; ""Continental Sub-Arctic Regions ""; ""Greenland Region""; ""4. ARCTIC PBL CLIMATOLOGY RECONSTRUCTION"" ""Dynamic Re-Stratification Processes""""Radiation Re-Stratification Processes""; ""Temperature Inversions""; ""Clouds""; ""Wind Speed and Aero-Dynamical Surface Roughness""; ""Turbulent Surface Fluxes and the PBL Life-Time""; ""5. REGIONAL SPECIFICS OF THE ARCTIC PBL CLIMATOLOGY ""; ""Arctic and Sub-Arctic PBL over Continents (Canadian, Siberian and Alaska Regions) ""; ""Arctic PBL over Ice-Covered Arctic Ocean (Central and Siberian Arctic Regions) ""; ""Arctic PBL over Ice Sheets and Glaciers (Greenland Region) ""; ""Arctic PBL near Ice Edge (Atlantic and Baffin Bay Regions) ""

6. RECENT CHANGES IN THE PBL CLIMATOLOGY Representation of Arctic PBL in Meteorological Models; Projects for Arctic PBL in XXI Century; 7. SUMMARY; ACKNOWLEDGMENTS; REFERENCES; NONEQUILIBRIUM THERMODYNAMIC THEORY OF ATMOSPHERIC TURBULENCE; ABSTRACT; 1. INTRODUCTION; 2. BASIC THEORY OF NONEQUILIBRIUM THERMODYNAMICS OF ATMOSPHERIC TURBULENCE; 2.1. The Entropy Equilibrium Equation and the Linear Phenomenological Relations of Atmospheric System; 2.2. Turbulent Transport of the Atmospheric Heat and Vapor? Fourier's Law, Fick's Law, Dufour Effect and Soret Effect of the Atmospheric Turbulent Eddy Viscosity; 2.3. The Turbulent Transport of Atmospheric Momentum and the Vortex Theorem; 2.3.1. Linear Phenomenological Relation of the Atmospheric Momentum Transport; 2.3.2. The Theorem of Turbulent Intensity and the Theorem of Turbulent Momentum Transport; 2.4. Vortex Theorem; 3. SIMILARITY THEORY AND DETERMINING LINEAR PHENOMENOLOGICAL COEFFICIENTS; 3.3.3. The Form of the Similarity Function,  $\chi$ , of the Turbulent Intensity

---