Record Nr. UNINA9910782116203321 Autore Cornille Patrick Titolo Advanced electromagnetism and vacuum physics [[electronic resource] /] / Patrick Cornille New Jersey, : World Scientific, 2003 Pubbl/distr/stampa **ISBN** 1-281-93564-6 9786611935641 981-279-522-7 Descrizione fisica 1 online resource (794 p.) Collana World Scientific series in contemporary chemical physics; ; v. 21 529.2 Disciplina Electromagnetic theory - Mathematics Soggetti Electromagnetic waves - Transmission Vacuum Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Includes bibliographical references (p. 723-757) and index. Nota di bibliografia Nota di contenuto : 1 INTRODUCTION AND SURVEY **CONTENTS PREFACE** : 2 WAVE MEANING OF THE SPECIAL RELATIVITY THEORY : 2-1 Critical Review of the Interpretation of Special Relativity : 2-2 Calculation of the Rectilinear Accelerated Motion of a Particle 2-3 Analysis of the Lorentz-Poincare Transformation 2-3-1 Constant Acceleration Motion 2-3-2 Constant Velocity Motion : 2-4 Wave Meaning of the Lorentz-Poincare Transformation ; 2-5 Length Contraction and Time Dilation of a Moving Body 2-6 Comparison Between Elbaz and De Broglie Approaches 2-7 Different Meanings of the Lorentz-Poincare Transformation 2-8 The Concept of Simultaneity : 2-9 Definition of Eulerian and Lagrangian Coordinates : 2-9-1 Path Vector Definition : 2-9-2 Lagrangian Definition ; 2-9-3 Eulerian Definition ; 2-9-4 Moving Grid Definition 2-9-5 Special Relativity Definition 3 CHANGE OF REFERENCE FRAME : 3-1 Change of Reference Frame without Rotation ; 3-2 Change of Reference Frame with Rotation ; 32-1 Calculation of Positions in a Change of Reference Frame; 3-2-2 Invariance of Distances in a Change of Reference Frame 3-2-3 Calculation of Velocities in a Change of Reference Frame 3-2-4 Calculation of Accelerations in a Change of Reference Frame; 3-2-5 Derivative of a Vector in a Rotating Reference Frame; 3-2-6 Equivalence Between the Lorentz Force and Non-inertial Terms 3-2-7 Calculation of the Stress and Rotation Dyads in a Change of Reference Frame

Sommario/riassunto

This book is aimed at a large audience: scientists, engineers, professors and students wise enough to keep a critical stance whenever confronted with the chilling dogmas of contemporary physics. Readers will find a tantalizing amount of material calculated to nurture their thoughts and arouse their suspicion, to some degree at least, on the so-called validity of today's most celebrated physical theories.

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