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Nota di contenuto	Radio Wave Propagation in the Marine Boundary Layer; Preface; Contents; 1 Atmospheric Boundary Layer and Basics of the Propagation Mechanisms; 1.1 Standard Model of the Troposphere; 1.2 Non-standard Mechanisms of Propagation; 1.2.1 Evaporation Duct; 1.2.2 Elevated M-inversion; 1.3 Random Component of Dielectric Permittivity; 1.3.1 Locally Uniform Fluctuations; References; 2 Parabolic Approximation to the Wave Equation; 2.1 Analytical Methods in the Problems of Wave Propagation in a Stratified and Random Medium 2.2 Parabolic Approximation to a Wave Equation in a Stratified Troposphere Filled with Turbulent Fluctuations of the Refractive Index2. 3 Green Function for a Parabolic Equation in a Stratified Medium; 2.4 Feynman Path Integrals in the Problems of Wave Propagation in Random Media; 2.5 Numerical Methods of Parabolic Equations; 2.6 Basics of Focks Theory; 2.7 Focks Theory of the Evaporation Duct; References; 3 Wave Field Fluctuations in Random Media over a Boundary Interface; 3.1 Reflection Formulas for the Wave Field in a Random Medium over an Ideally Reflective Boundary 3.1.1 Ideally Reflective Flat Surface3.1.2 Spherical Surface; 3.2

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Sommario/riassunto

Based on his many years of professional experience at leading companies in communications technology, the author describes an analytical solution for wave propagation over the sea surface in an atmospheric boundary layer. His approach allows the detailed analysis of combined effects of diffraction, refraction and scattering in random media. While specific applications covered are targeted at radio wave propagation over the sea surface, a similar approach is applicable to many problems in underwater acoustics, seismology, solid matter physics and astrophysics.