

THE EXACT REPRESENTATION OF A SOLUTION
BY THE METHOD OF PHASE FUNCTIONS
FOR THE WKB-APPROXIMATION

V. Furman

Ivan Franko L'viv National University
(4, *Grushevsky Str., L'viv 79005, Ukraine*)

S u m m a r y

New phase equations are deduced within the method of phase functions by using functions, on which the approximate Wentzel — Kramers — Brillouin method and the modified Jeffreys one are based, and a way to find an exact solution of the Schrodinger equation within these methods is proposed. The relations between partial scattering phases $\delta_\ell(k)$ and scattering phases for the WKB method are established, and the dependences for partial scattering characteristics and their limit values are found to determine the coefficients of transmission and reflection. The derived expressions and solutions of the phase equations can be useful in solving the problems of scattering in metallic crystals and in studying the processes of passage and interaction of fluxes of radiation with various physical systems.