

A new asymptotic energy expansion method

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Abstract

A new asymptotic energy expansion (AEE) method is presented for 1-D systems. The method is based on power series expansion of the quantum action variable J in energy and can be applied to a wide range of potentials. Contour integrals involved in the method are much simpler than that in WKB methods. Recurrence relations are derived for any potential with scaling property and general integral formulae are presented in terms of Γ functions. © 2001 Elsevier Science B.V. All rights reserved.
