

Coordinate Asymptotic Behavior of the Radial Three-Body Wave Function of a Bound State

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Abstract—The true three-body asymptotic behavior of the wave function of an $a = bcd$ bound state has been analyzed for the case of short-range interactions between particles b , c , and d . It has been shown that the resulting asymptotic expression involves a factor that can affect noticeably the asymptotic values of the three-body wave function for some directions in configuration space. The asymptotic behavior of the ${}^6\text{He}$ wave function in the three-body (αnn) model has been analyzed on the basis of this expression. Information about the value of the three-body asymptotic normalization factor for this wave function has been obtained.