

Calculation of the Scattering Amplitude of A Nucleus in the Presence of the Yukawa Potential

(withdrawn)

L. Nickhah, A. A. Rajabi, and F. Pakdel

Department of Physics, University of Shahrood, Shahrood, Iran

fatemehpakdel185@yahoo.com

Received 26-06-2015, Published 20-10-2015

ABSTRACT

The scattering amplitudes are obtained from the phase shifts for a spherically symmetric potential using the D-dimensional Schrödinger equation and the partial wave method. Plots show that the real and imaginary parts of the scattering amplitude are almost similar behavior.

Keywords: Yukawa potential; D-dimensional Schrödinger equation, partial wave method, Hypergeometric function, scattering amplitude