

# RESONATING GROUP CALCULATION OF SCATTERING ${}^3\text{He}(d, d){}^3\text{He}$ AT $E = 1 - 9$ MeV

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Distance dependent form of cluster mean field parameters is used for interacting channel fragments in resonating group calculation of elastic scattering  ${}^3\text{He}(d, d){}^3\text{He}$ . Simple two level approximation of this dependence enables to obtain an essential improving of calculated differential cross sections. In the interaction region the values of cluster radii are near 55 % from far asymptotic phenomenological value, the transition point at studied energy values is placed within interval 11.2 - 12.6 fm of intercluster distance.

*Keywords:* elastic scattering, resonating group method, cluster potential, distance dependent basis.