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J/Ψ - J/ Ψscattering cross sections of Quadratic and Cornell Potentials M. IMRAN JAMIL, Department of Physics, School of Science, University of Management and Technology , Lahore (54770), Pakistan., SOHAIL GILANI, Department of Physics,University of Okara, Okara (56300), Pakistan, AHMAD WASIF, Department of Physics, Forman Christian College, Lahore (54600), Pakistan, A. SATTAR KHAN, AHMAD AWAN, Department of Physics, Government College University, Lahore (54000), Pakistan. — We study the scattering of J/Ψ - J/Ψ mesons using quadratic and Cornell potentials in our tetraquark ($c\bar{c}c\bar{c}$) system. The state vector of the system in the restricted gluonic basis is written by using adiabatic approximation and Hamiltonian is written via quark potential model. Resonating group technique is used to get the integral equations which are solved to get the unknown inter-cluster dependence of the total wavefunction of our tetraquark system. From the solutions, T-Matrix elements are calculated and eventually the scattering cross sections are obtained using the two potentials respectively. We compare these cross sections and find that the magnitude of scattering cross sections of quadratic potential is higher than Cornell potential.

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