

2) The $\alpha - \alpha$ supersymmetric potential at low energies for the neutral α -matter ground state calculation. Data predarii 15/12/2012

We review here the present knowledge on the $\alpha - \alpha$ potentials existent in the literature in light of the elastic phase-shifts data at energies ≤ 15 MeV and the resonant S-state in ^8Be . We analyze new types of gaussian potentials that provide a better description of the phase-shift data and independently the resonances observed in the $\alpha - \alpha$ scattering. We discuss the implication of these potentials on the alpha-matter EOS.