

**On the relation between the density dependence of
nucleus-nucleus potential and nuclear matter parameters**

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The optical potential is calculated using the double folding model with the density dependent effective nucleon-nucleon (NN) interaction v_{nn} . The parameters of v_{nn} interaction are determined so as to fit the binding energy of saturated nuclear matter (NM). The effect of the projectile incident energy on the values of these parameters is studied. The elastic scattering of ^{16}O - ^{12}C system is studied at 139 MeV using the density dependent nucleus-nucleus interaction whose parameters are deduced from NM calculations. The obtained results are satisfactory with renormalization factor of $NR = 0.7$ as compared with the experiment.