

The effect of nuclear matter saturation on nucleon nucleon interaction

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The folded potential for p-nucleus is calculated based on nucleon-nucleon density dependent interaction satisfying the saturation condition for nuclear matter. The resulting potential for elastic scattering of $P-^{12}\text{C}$, $P-^{16}\text{O}$, $P-^{40}\text{Ca}$, $P-^{208}\text{Pb}$ at different energies.