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### **Mechanism of Isospin Equilibration in Semi-Peripheral Heavy Ion Reactions<sup>1</sup>**

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The BUU formalism with the inclusion of fluctuations was used to study a mechanism of isospin equilibration in semi-peripheral collisions of heavy ions close to the Fermi energy. In order to investigate the density dependence of the asymmetry term in the nuclear equation of state (i.e. the asy-stiffness of the equation of state) the calculations with different parametrization of this term were performed. It has been found that the low density interface between the interacting nuclei which develops in semi-peripheral collisions plays an important role in controlling the currents of neutrons and protons. The isospin transport is affected by an interplay between drift and diffusion being driven by differences in N/Z ratio and by density gradients. Both, the drift and the diffusion are sensitive to the asy-stiffness of the nuclear equation of state. A study of the isospin transport ratio shows that the experiment seems to favor a more asy-stiff equation of state and that a more asy-soft equation leads to a larger isospin equilibration. We may conclude that the charge equilibration measurements for semi-peripheral collisions provide an effective tool to investigate the properties of asymmetric nuclear matter.

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