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Studies of heavy residues from peripheral collisions near the Fermi energy[1]

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Neutron-rich nuclei have been produced in peripheral collisions near the Fermi energy. The heavy residues and intermediate mass fragments from the reactions of 86Kr, 64Ni and 136Xe beams with 112,124Sn and 58,64Ni targets have been measured with MARS and BigSol. Additionally the reactions of 86Kr and 64Ni on 208Pb have been studied. These experiments have been designed to study the deep inelastic reaction mechanism. The exchange of nucleons between projectile and target is dependent on the neutron-richness of the reaction partners and has been linked to the nuclear symmetry energy. Experimental results will be presented and compared with predictions of theoretical models.

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