Collective features of nuclear dynamics with exotic nuclei within microscopic transport models

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We employ a transport model based on Landau-Vlasov equation to explore the dipolar response of neutron rich systems and its dependence on symmetry energy.

We present evidences for collective features of the pygmy dipole resonance and study its dependence with the mass number. We extract a parametrization $42A^{-1/3}$ for the energy centroid which agrees quite well with data for Ni, Zr, Sn and Pb.

In the second part we apply a transport model, Stochastic Mean Field, which also relies on Landau-Vlasov kinetic equation, to heavy ions collisions and investigate the correlations between the collective flow of Intermediate Mass Fragments and their isospin content, which can provide new informations about the early stages of isospin and fragmentation dynamics at Fermi energies.

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[3]   Baran, V.; Colonna, M.; Di Toro, M.; Zus, R.; PHYSICAL REVIEW C Volume: **85** Issue: **5**   Article Number: **054611**