

# **Constraining Symmetry Energy with Isospin Ratios from nucleons to fragments**

Fei Lu

*Peking University, Beijing, 100871, China*

Using the Improved Quantum Molecular Dynamics model, we explore the sensitivities of isospin observable constructed based on the isospin contents of the emitted nucleons, such as neutron and protons or light charged particles of triton and Helium 3 as well as the intermediate fragments and the inter-relationship between these observables. Preliminary results from the simulations and comparisons to data will be presented.