

# Signals for dynamical and statistical process form IMF-IMF correlation function

## Summary

In Heavy Ion Collisions (HIC) at Fermi energy ( $10 \text{ MeV/nucleon} \leq E/A \leq 100 \text{ MeV/nucleon}$ ) the produced hot nuclear systems decay by different mechanisms with characteristic time scales (neck emission, dynamical and sequential fission, multifragmentation, fusion-evaporation, ecc.), depending on the available energy, sizes, isospin of the interacting projectile and target systems.

The space-time sensitivity of different fragment-fragment correlation functions of Intermediate Mass Fragments (IMFs) of atomic charges in the range  $3 \leq Z \leq 25$  have been investigated in order to pin down the phase space characteristic of their emission region.

In particular, IMF-IMF correlation functions have been measured for the systems  $^{112,124}\text{Sn}+^{58,64}\text{Ni}$  investigated with the forward part of CHIMERA at the bombarding energy of  $E/A = 35 \text{ MeV/nucleons}$  where a strong competition between dynamical and statistical production mechanism of heavy fragments has been found [1]. Comparisons of the data with theoretical simulations will be also presented.

[1]P. Russotto et al. PHYSICAL REVIEW C 91, 014610 (2015)

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