



Contribution ID: 24

Type: Oral

Experimental investigation of cluster production at Fermi energies in excited light systems

Tuesday, 19 September 2023 11:05 (20 minutes)

Four different reactions, $^{32}\text{S}+^{12}\text{C}$ and $^{20}\text{Ne}+^{12}\text{C}$ at 25 and 50 MeV/nucleon, have been measured with the FAZIA detector, isotopically resolving the systems. Events have been well classified and fragment properties have been compared with AMD simulation coupled with the HFI afterburner, dedicated to light nuclei de-excitation. Here we report on a first comparison, shown in C. Frosin et al. PRC 107, 044614 (2023), where we obtained an explicit confirmation of the role of cluster aggregation in the reaction dynamics. Moving from this point, preliminary results on a second Bayesian analysis will be also presented, to link the clusterization probability to other key parameters, such as the in-medium nucleon-nucleon cross-section.

Primary author: CAMAIANI, Alberto (INFN Sez. Firenze)

Presenter: CAMAIANI, Alberto (INFN Sez. Firenze)

Session Classification: Constraints from heavy-ion collisions at Fermi energies

Track Classification: Constraints from heavy-ion collisions at Fermi energies