



Contribution ID: 2

Type: **not specified**

Study and comparison of the decay modes of the systems formed in the reactions $78\text{Kr}+40\text{Ca}$ and $86\text{Kr}+48\text{Ca}$ at 10 A MeV

Tuesday, November 15, 2011 5:20 PM (30 minutes)

The first results of the ISODEC experiment, performed at the INFN-Laboratori Nazionali del Sud (LNS) by using the CHIMERA detector, will be presented. The principal aim of this experiment is to study the competition between the various disintegration modes of $118,134\text{Ba}$ produced in the reactions $78\text{Kr}+40\text{Ca}$ and $86\text{Kr}+48\text{Ca}$ at 10 A MeV, exploring the isospin dependence of the decay modes of medium mass compound nuclei. The experiment complements data already obtained at 5.5 MeV/A for $78,82\text{Kr}+40\text{Ca}$ reactions, previously realized with beams delivered by GANIL facility and by using the INDRA detector. Staggering effects are evident in the Z distributions, as well as different isotopic composition and enrichment for the reaction products in the two systems.

Absolute cross sections calculations of the reaction products are in progress, to provide important indication on the isospin influence on the reaction mechanism and fragments production.

Comparisons with theoretical models are in progress to estimate the influence of structural effects during the separation phase in asymmetric fission.

Author: POLITI, Giuseppe (Dipartimento di Fisica e Astronomia - Università di Catania - ITALY)

Presenter: POLITI, Giuseppe (Dipartimento di Fisica e Astronomia - Università di Catania - ITALY)