

Contribution ID: 180 Type: Oral presentation

Asymmetry Dependence of the Nuclear Caloric Curve

Thursday, 25 June 2015 15:20 (20 minutes)

Click here to download the template: <a href="https://agenda.infn.it/materialDisplay.py?mater Word , Lat

My recent measurements have demonstrated a dependence of the caloric curve on the neutron-proton asymmetry. If confirmed, this represents a new feature of the nuclear equation of state. These results were made possible by the complete isotopic reconstruction of excited quasi-projectiles produced in heavy ion collisions. I will discuss the isotopic reconstruction and multiple probes of the temperature, which are the strengths of this measurement. I will address the uncertainty which arises from the neutron measurement. I will present the status of an independent experiment designed to measure the caloric curve in a way that completely eliminates the previous uncertainties and will allow us to confirm or deny our initial discovery.

Primary author: Dr MCINTOSH, Alan (Texas A&M University, USA)

Co-authors: BONASERA, Aldo (LNS); Mr ZARRELLA, Andrew (Texas A&M University); Prof. SOULIOTIS, George (University of Athens); Dr MABIALA, Justin (Texax A&M University); Dr HAGEL, Kris (Cyclotron Institute, Texas A & M University); Mr MAY, Larry (Texas A&M University); Ms HEILBORN, Lauren (Texas A&M University); Dr MARINI, Paola (Texas A&M University); Dr CAMMARATA, Paul (Texas A&M University); Dr WUENSCHEL, Sara (Texas A&M University); Prof. YENNELLO, Sherry (Texas A&M University); Dr ZHENG, hua (Istituto Nazionale de Fisica Nucleare Laboratori Nazionali del Sud (INFN,LNS))

Presenter: Dr MCINTOSH, Alan (Texas A& M University, USA)

Session Classification: Equation of State of Neutron-Rich Nuclear Matter, Clusters in Nuclei and Nuclear Reactions

Track Classification: Equation of State of Neutron-Rich Nuclear Matter, Clusters in Nuclei and Nuclear Reactions