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Nuclear reactions studies at experimental Basic Nuclear Physics line at CNA: the case of 6Li +12 C reaction.

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The study of nuclear reactions involving heavy ions and light targets at low energies provides crucial information for the development and corroboration of different theories and models applied to astrophysical environments. The experimental Basic Nuclear Physics (FNB) line of National Accelerators Center (CNA), is being adapted and prepared with the aim of studding these reactions, taking advantage of the target development and characterization provided at the CNA and collaborating facilities. As a first step, the reaction of $^{6}Li +^{12} C$ at different energies around the Coulomb barrier, covering a wide angular range, has been measured.

In this talk it will be detailed the experimental setup employed for the $^{6}Li +^{12} C$ reaction measurement at CNA and the preliminary results of the data analysis carried out will be presented and discussed. Finally, the perspectives of the future work related to the experimental setup for other nuclear reactions studies at the FBN experimental line will be presented.

Abstract

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