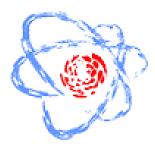
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Experimental study of Mass-Total Kinetic Energy distributions of fragments formed in the ⁴⁸Ca + ²⁰⁸Pb reaction

Saturday 14 June 2025 10:40 (10 minutes)

S. Sanila, E. M. Kozulin, G. N. Knyazheva, A. A. Bogachev, I. M. Itkis, K. V. Novikov, V. A. Rachkov, I. V. Pchelintsev, I. V. Vorobiev, Aniruddha Dey, R. S. Tikhomirov, K. A. Kulkov, E. O. Savelieva Flerov Laboratory of Nuclear Reactions, Joint Institute for Nuclear Research, 141980, Dubna, Russia (*Email:sanila@jinr.ru) The **Ca + * 208Pb reaction is distinguished by its unique combination of advantages, as both interacting nuclei are doubly magic. The present work aims to investigate the characteristics of the mass-total kinetic energy (M-TKE) distribution of binary reaction products from the **Ca + * 208Pb reaction, with a detailed examination of this reaction system. The experiments were carried out using the U400 cyclotron at the Flerov Laboratory of Nuclear Reactions, Dubna, Russia. Beams of **Ca with 208-281 MeV energies bombarded thin targets of **208Pb to populate the **256No compound nucleus (CN) at different excitation energies. The mass-energy distributions of primary binary reaction products were measured using the double-arm time-of-flight (ToF-ToF) spectrometer CORSET [1]. A detailed analysis has been carried out on the mass-total kinetic energy distribution of fission-like fragments obtained from the **Ca + * 208Pb reaction. Reference [1] E. M. Kozulin et al., Instrum. Exp. Tech. 51, 44 (2008).

Summary

Presenter: SATHYAN, Sanila

Session Classification: Section Talks

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