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Clusters and higher moments of proton number fluctuations

Thursday 10 August 2017 14:00 (30 minutes)

We show how the skewness and kurtosis of the proton number distribution are influenced by the fact, that some of the produced protons are bound in deuterons. Although the number of deuterons may not be high, the higher moments of proton multiplicity distribution are so sensitive to details that the effect is large. This is relevant for experimental studies of these moments which aim at identifying the deconfinement phase transition. We also propose to use higher moments of deuteron distribution as an efficient tool for pinning down the mechanism of deuteron production.

Author: Dr TOMASIK, Boris (Univerzita Mateja Bela)

Co-authors: Dr STEINHEIMER, Jan (Frankfurt Institute for Advanced Studies); Prof. BLEICHER, Marcus (Frankfurt Institute for Advanced Studies); Ms PAULINYOVA, Zuzana (Pavol Jozef Safarik University)

Presenter: Dr TOMASIK, Boris (Univerzita Mateja Bela)

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