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The first results of PSD hadron calorimeter prototype response measurements at the mCBM

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The CBM experiment for the study of strongly interacting nuclear matter is currently under construction at the FAIR accelerator complex. As a demonstration experiment to check the performance of all detector systems of the CBM experiment, the mCBM experiment was launched within the framework of the FAIR Phase-0 program. One of the modules of the PSD hadron calorimeter (mPSD), equipped with the free-streaming readout electronics, was installed and studied at the mCBM in nuclear collisions at an interaction frequency of up to 5 MHz. This report mentions the primary experimental results of the mPSD response in O+Ni collisions at a kinetic energy of 2A GeV and their comparison with simulated data.

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