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# Performance study of the Projectile Spectator Detector for the CBM Experiment

*Wednesday, 7 October 2015 16:00 (15)*

The expected performance of the Projectile Spectator Detector (PSD) for the CBM experiment at the future FAIR facility will be presented. The PSD is a compensating lead-scintillator calorimeter designed to measure the energy distribution of the projectile nuclei fragments (spectators) and forward going particles produced close to the beam rapidity. The main purpose of the PSD is to provide an experimental estimates of heavy-ion collision centrality and reaction (symmetry) plane orientation.

A sample of heavy-ion collisions simulated with realistic modeling of nuclei fragment production, directed and elliptic flow of produced particles and transported through the GEANT Monte-Carlo of the CBM detector geometry is used to study the PSD performance. Performance of the centrality and reaction plane determination is explored with the PSD as a standalone detector and in a combination with other CBM subsystems.

## Presentation type

Section talk (10+5 min)

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