

## Performance of the Scintillation Wall in the BM@N experiment

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The performance of the Scintillation Wall (ScWall) detector during the first physics run of the BM@N fixed target experiment with Xe+CsI at 3.8 AGeV has been demonstrated. Only charged fragments with charges  $Z = 1$  and  $Z = 2$  were observed in the scintillator detectors of the central part of the ScWall, while fragments with charges up to  $Z = 5$  were also visible close to the beam hole. Comparison of the experimental charge distribution with the results of simulations using the DCM-QGSM-SMM and PHQMD models underestimated the yields of  $Z = 2$  fragments and overestimated those with higher  $Z$ , suggesting the need for adjustments to these models to better describe the production of spectator fragments. Centrality evaluation using the correlation of the ScWall total charge with the impact parameter is significantly less sensitive to centrality than that obtained from the correlation of the impact parameter with the Forward Hadron Calorimeter (FHCAL) energy deposition. It is shown that to obtain 80% purity in the most central class of events, the width of the centrality class should not be less than 20%. ScWall is effective for event plane estimation, but FHCAL provided better resolution of the correction factor for accurate flow measurements at the BM@N.

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