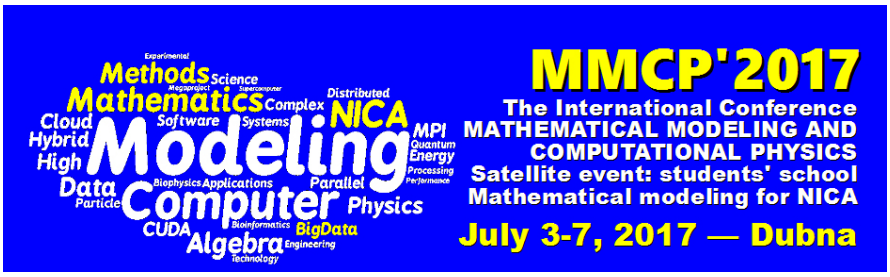

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Global Alignment of BM@N Drift Chambers

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Drift chambers (DCH's) constitute an important part of the tracking system of the BM@N experiment designed to study the production of baryonic matter at the Nuclotron energies.
The method [1,2] of particle hit and track reconstruction in the drift chambers has been already proposed and tested on the BM@N deuteron beam data.
In this study the new approach to global alignment of DCH's is introduced and applied in order to correct the systematic errors of experimental data caused by the detectors misalignment. The approach is based on the GEANT backward extrapolation of DCH reconstructed deuteron beam to a position prior to being affected by the BM@N magnetic field. The difference between the extrapolated and the assumed beam position is subsequently used to globally align both the drift chambers.

References

[1] J. Fedorišin, EPJ Web of Conferences 108, 02021 (2016)
[2] J. Fedorišin, EPJ Web of Conferences 138, 11005 (2017)

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