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SPD Beam-beam counter detector signal response uniformity tests with cosmic muons

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Beam-Beam Counter (BBC) is a part of Spin Physics Detector (SPD) setup at the collider NICA, designed for event plane reconstruction and local polarimetry. BBC consist of scintillation plates –tiles which collect light through a shifter. The light from shifters is registered using SiPM.
To test the uniformity of responses from identical tiles of the BBC SPD detectors, a scintillation telescope was assembled to register cosmic muons. The study was performed both in spectroscopy and ToT (Time over Threshold) modes. The results were obtained with CAEN DT5202 front-end readout system, that is planned to be used in the BBC detector for phase 0. The uniformity of the detector tile response in both modes was evaluated.

Author: TERTYSHNAYA, Kseniya (NRNU MEPhI)

Co-authors: ZAKHAROV, Arseny (National Research Nuclear University MEPhI); SHAFIKOVA, Dina (National Research Nuclear University "MEPhI); DUBININ, Filipp (Lebedev Institute of Physics (RAS), NRNU MEPhI); TETERIN, Peter (MEPhI); DORONIN, Semen (Institute of Molecular Genetics of Russian Academy of Sciences)

Presenter: TERTYSHNAYA, Kseniya (NRNU MEPhI)

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