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The SPD Beam-Beam Counter scintillation detector prototype tests with FERS 5200 front-end readout system

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The Spin Physics Detector is an experiment at NICA designed to study the spin structure of the proton and deuteron and the other spin-related phenomena using polarized beams.The collision energy is up to 27 GeV and the luminosity is up to 10^32 cm^−2 s^−1 in pp mode.
Two scintillator-based detectors, Beam-Beam Counters (BBC), will be installed upstream and downstream the interaction point and will serve as a tool for beam diagnostics including local polarimetry. The BBCs will be designed as high granularity scintillation detectors.
In this talk, we present the tests of the BBC prototype based on the tiles with the green wavelength shifter (WLS) and SensL SiPM readout. The prototype was tested with 1x1 mm^2 and 3x3 mm^2 SensL SiPM with the FERS-5200 front-end readout system. The amplitude and timing resolutions for different tiles using cosmic rays are obtained.

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