Subject: RICH B-TOF Abstract and summary
Posted by Anonymous Poster on Thu, 12 Apr 2018 08:37:07 GMT
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Here is the abstract and the summary (attached) for the B-TOF contribution for the RICH conference.
The submission deadline is on sunday the 15th, so I would ask for feedback until saturday the 14th.

Kind regards
Sebastian

Abstract:

The barrel-Time-of-Flight detector is one of the outer layers of the multi-layer design of the PANDA target spectrometer, covering an angle of 22 $< \theta_{lab} <$ 150. PANDA, which is being built at the FAIR facility, will use cooled antiprotons on a fixed Hydrogen or nuclei target, to study broad topics in hadron physics.

The detector is a scintillating tile hodoscope with an SiPM readout. A single unit consists of a $90 \times 30 \times 5$ mm^3 fast plastic scintillator tile and 3×3 mm^2 SiPM photosensors on both ends. Four SiPMs are conected in series to overcome the limited sensor size of a single SiPM sensor and to improve the time resolution darastically (~100 ps to 50 ps).

While the PANDA experiment is equipped with DIRC detectors for PID of faster particles, the barrel TOF complements the setup by providing additional PID information up to ~1.4 GeV/c and a π/K separation of ~5 sigma up to the Cherenkov threshold.

In this contribution we will also review recent topics on SiPMs and compare them to MCP-PMTs.

File Attachments

1) Summary.pdf, downloaded 538 times