

PANDA Barrel DIRC: From Design to Component Production

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Excellent particle identification (PID) will be essential for the PANDA experiment at FAIR. The Barrel DIRC will separate kaons and pions with at least 3 s.d. for momenta up to 3.5 GeV/c and polar angles between 22 and 140 deg.

After successful validation of the final design in the CERN PS/T9 beam line, the tendering process for the two most time- and cost-intensive items, radiator bars and MCP-PMTs, started in 2018. In Sep. 2019 Nikon was selected to build the fused silica bars and successfully completed the series production of 112 bar in Feb. 2021. Measurements of the mechanical quality of the bars were performed by Nikon and the optical quality was evaluated at GSI. In Dec. 2020, the contract for the fabrication of the MCP-PMTs was awarded to PHOTONIS and the delivery of the first-of-series MCP-PMTs is expected in June 2021.

We present the design of the PANDA Barrel DIRC as well as the status of the component series production and the result of the quality assurance measurements.

TIPP2020 abstract resubmission?

No, this is an entirely new submission.

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