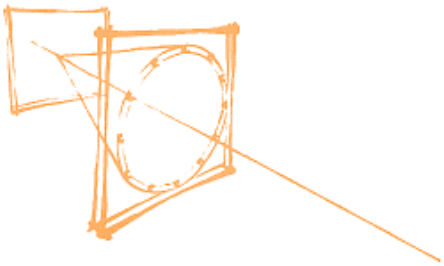

ID de Contribution: **3** Type: **Poster**

Design of a disc DIRC detector for the WASA experiment

jeudi 6 mai 2010 10:00 (1 minute)

It is planned to install a disc DIRC counter in the WASA experiment at the COSY proton storage ring in Juelich. The purpose of this counter is to improve for 400 MeV to 800 MeV protons the kinetic energy measurement in the forward direction, measuring their speed at the few per mille level.

The disc DIRC is to be placed downstream of the WASA tracking counters in front of stacked plastic scintillator blocks that with a dE/dx profile continue to provide the particle identification.
The segmentation into four quarter-discs allows to incline the radiator relative to the incoming particles and thus lower the threshold velocity for light propagation inside the DIRC radiator.

It is planned to prototype two disc DIRC versions, a focussing DIRC and a time-of-propagation DIRC. The construction of two full-scale quarter disc prototypes is foreseen for 2010.

With the view of prototyping DIRC detectors in WASA for the upcoming PANDA experiment, we aim to validate the simulation results and gain experience in operating such a detector type in a hadron machine.

Please indicate ”poster” or ”plenary” session. Final decision will be made by session coordinators.

plenary

Auteur principal: Dr FÖHL, Klaus (Universität Gießen)

Orateur: Dr FÖHL, Klaus (Universität Gießen)

Classification de Session: Poster Session 2 (Summary)