Contribution ID: **76**   Type: **Oral presentation**

The Forward RICH Detector for the PANDA Experiment

Monday 5 September 2016 17:40 (25 minutes)

The PANDA detector at the international accelerator Facility for Antiproton and Ion
Research in Europe (FAIR) in Darmstadt, Germany will address fundamental questions
of hadron physics. The PANDA Forward RICH (FRICH) is intended for identification of charged particles produced in antiproton collisions with a fixed hydrogen target that fly in the forward direction below 5°–10° of polar angle and with momentum between 3 GeV/c and 15 GeV/c.
The Forward RICH will employ a focusing aerogel radiator to achieve the required performance without use of gaseous Cherenkov radiator. Several precisely aligned flat mirrors will reflect light on the photon detector which is located outside of the detector's effective aperture. Photon detector consist of flat panel multianode photomultiplier tubes (MaPMT). The Forward RICH R&D relies on experience gained in developing RICH detectors for LHCb, CBM, Belle II and the Super Charm-Tau Factory project. A baseline design of the PANDA Forward RICH will be discussed including results from the full Monte-Carlo simulation and results of measurements and tests of the system's components.

Registered

Yes

Primary authors: Dr BARNYAKOV, Alexander (Budker Institute of Nuclear Physics); Dr DANILYUK, Alexander (Boreskov Institute of Catalysis); Prof. ONUCHIN, Alexei (Budker Institute of Nuclear Physics); Mr KORDA, Dmitriy (Budker Insitute of Nuclear Physics); Dr KRAVCHENKO, Evgeniy (Budker Institute of Nuclear Physics, Novosibirsk State University); Mr KUYANOV, Ivan (Budker Institute of Nuclear Physics); Mrs MARTIN, Karina (Budker Institute of Nuclear Physics); Mr BELOBORODOV, Konstantin (Budker Institute of Nuclear Physics, Novosibirsk State University); Mr BARNYAKOV, Mikhail (Budker Institute of Nuclear Physics); KONONOV, Sergey A. (Budker Institute of Nuclear Physics, Novosibirsk State University); Mr BOBROVNIKOV, Viktor (Budker Institute of Nuclear Physics)

Presenter: KONONOV, Sergey A. (Budker Institute of Nuclear Physics, Novosibirsk State University)

Session Classification: Novel Cherenkov imaging techniques for future experiments

Track Classification: Novel Cherenkov imaging techniques for future experiments