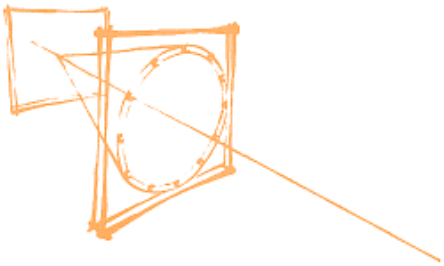

Contribution ID: **54** Type: **Poster**

The LHCb RICH silica aerogel performance with LHC data

Thursday, May 6, 2010 10:00 AM (1 minute)

In the LHCb detector at the Large Hadron Collider, powerful charged particle identification is performed by Ring Imaging Cherenkov (RICH) technology. In order to cover the full geometric acceptance and the wide momentum range (1-100 GeV/c), two detectors with three Cherenkov radiators have been designed and installed.
In the medium (10-40 GeV/c) and high (30-100 GeV/c) momentum range, gas radiators are used (C4F10 and CF4 respectively). In the low momentum range (1 to a few GeV/c) pion/kaon/proton separation will be done with photons produced in solid silica aerogel. A set of 16 tiles, with the large transverse dimensions ever (20x20 cm^2) and nominal refractive index 1.03 have been produced. The tiles have excellent optical properties and homogeneity of refractive index within the tile of ~1%. The first data collected at LHC are used to understand the behaviour of the RICH: preliminary results will be presented and discussed on the performance of silica aerogel and of the gas radiators C4F10 and CF4.

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

plenary

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Session Classification: Poster Session 2 (Summary)

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