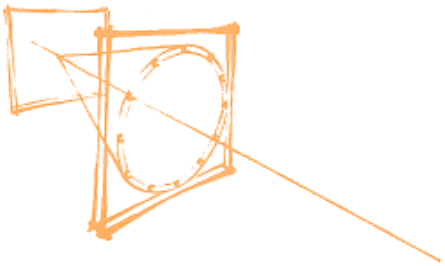

ID de Contribution: **104** Type: **Oral presentation**

Reconstruction and Particle Identification Performance of the LHCb RICH detector

jeudi 6 mai 2010 17:55 (20 minutes)

Particle identification in the LHCb experiment is provided by two RICH detectors, covering a momentum range between 1 and 100 GeV/c. In order to maintain the integrity of the LHCb physics performance, it is essential to measure and monitor the particle identification efficiency and misidentification fraction over time. To achieve this, the unique kinematics associated with K-short, Lambda and D*decays are exploited to obtain high purity samples of pions, kaons and protons through the use of tracking information alone. Such calibration samples then allow for an unbiased assessment of the RICH detectors performance. Given the high production rates of K-short, Lambda and D* mesons at the LHC, monitoring of the RICH detectors performance is possible both “online” during running and “offline” after full-reconstruction of the data. Following analysis of the first LHC collisions, the performance of the LHCb RICH detectors will be presented. Efficiency and misidentification probabilities as a function of track momentum will be shown for each charged-particle type.

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

plenary

Auteur principal: Dr POWELL, Andrew (University of Oxford)

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Classification de Session: Pattern recognition and data analysis

Classification de thématique: Pattern recognition and data analysis