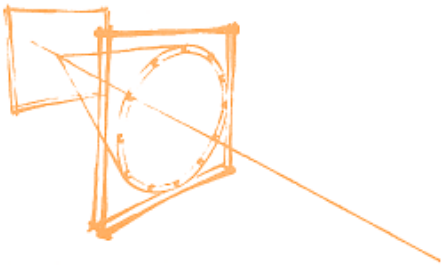

ID de Contribution: **47** Type: **Poster**

The LHCb RICH upgrade plans

jeudi 6 mai 2010 10:00 (1 minute)

The LHCb experiment plans to operate at an LHC luminosity of 2x10**32 /s cm2,
or typically one collision per bunch crossing.
After about five years it will have recorded a data sample of 10 fb-1.
At this time LHCb plans an upgrade to operate the detectors at a
significantly increased luminosity that will extend greatly its
potential for discovery and study of new phenomena.
The key to get such an improvement is to read out the full
detector at the LHC crossing rate of 40MHz
and to run the trigger in the data acquisition computer farm.
Studies performed to optimise the design of the LHCb Upgrade are presented.
The RICH detector will require new photon detectors as the current HPDs
have encapsulated electronics which
only supports reading out up to 1MHz data rate. Flat-panel Photo
Multiplier Tubes (PMTs) are evaluated
as a photon detector candidate and its properties including pulse height
and shape and cross-talk are measured.
The particle identification performance is studied as a function of
luminosities ranging up to ten times the design as foreseen for the LHCb
upgrade. Finally, the performance of flavour tagging using kaons, which
strongly relies on RICH particle identification will also be presented

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

plenary

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Classification de Session: Poster Session 2 (Summary)