



Contribution ID: 236

Type: Talk

【328】 Beam-gas vertex detector for beam profile measurement at the LHC

Wednesday 23 August 2017 18:45 (15 minutes)

The beam gas vertex detector (BGV) is a beam profile monitor at the Large Hadron Collider (LHC). It is based on a technique that was pioneered in the LHCb experiment where charged particles produced in inelastic beam-gas interactions are used to reconstruct beam-gas vertices and obtain the transverse beam shape. This non-destructive method allows the measurement of additional beam properties, like position, tilt and relative bunch populations, throughout the complete LHC cycle. A BGV demonstrator device using scintillating fibre detectors read out with silicon photomultipliers was installed in LHC Ring 2 in 2015. We present an overview of the project and report first results from the commissioning in 2016.

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Session Classification: Nuclear, Particle-and Astrophysics (TASK-FAKT)

Track Classification: Nuclear, Particle- and Astrophysics (TASK - FAKT)