



Contribution ID: 54

Type: Poster

First results from Quality Assurance Testing of MaPMTs for the LHCb RICH Upgrade

Monday, 5 September 2016 17:25 (15 minutes)

In 2019 the LHCb RICH detector will be upgraded to increase the read out rate from 1MHz to 40MHz. As a consequence, the current Hybrid Photon Detectors (HPDs) will have to be replaced. Multianode Photomultiplier Tubes (MaPMT) from Hamamatsu with 64-channels will be used: the 1-inch R13742 and the 2-inch R13743 MaPMTs (custom modifications of the MaPMTs R11625 and H12699). Quality assurance testing of these MaPMTs using custom developed readout electronics has started. We present the design and realisation of the test facilities to ensure consistency in testing and validation. A total of 3100 units of R13742 and 450 units of the R13743 will be tested requiring high efficiency and reliability from the test stations. We report on the test programme and protocols, characterising the units and assuring minimum specifications. First results of testing and detector characterisation will be presented, based on the pre-series production, comprising 50 units of R13742 and 28 units of R13743.

Registered

Yes

Primary author: GAMBETTA, Silvia (University of Edinburgh (GB))

Presenter: GAMBETTA, Silvia (University of Edinburgh (GB))

Session Classification: Poster Session B

Track Classification: Technological aspects and applications of Cherenkov detectors