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## **Beam test results for the upgraded LHCb RICH opto-electronic readout system**

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The LHCb experiment is devoted to high-precision measurements of CP violation and search for New Physics by studying the decays of beauty and charmed hadrons produced at the Large Hadron Collider (LHC).

Two RICH detectors are currently installed and operating successfully, providing a crucial role in the particle identification system of the LHCb experiment.

Starting from 2019, the LHCb experiment will be upgraded to operate at higher luminosity, extending its potential for discovery and study of new phenomena. Both the RICH detectors will be upgraded and the entire opto-electronic system has been redesigned in order to cope with the new specifications, namely higher readout rates, and increased occupancies.

The new photodetectors, readout electronics, mechanical assembly and cooling system have reached the final phase of development and their performance was thoroughly and successfully validated during several beam test sessions in 2014 and 2015 at the SPS facility at CERN.

Details of the test setup and performance results of the opto-electronic readout system will be presented.

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