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Single photon detection with MPGDs

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After the realization of the MWPCs with CsI PC for the RICH detector of the COMPASS experiment at CERN SPS, the COMPASS RICH was upgraded with four novel gaseous Photon Detectors (PD) based on MPGD technology, never used before in RICHes, for a total active area of 1.5 m². The new PDs consist of two layers of THGEMs, the first also acting as a reflective PC thanks to CsI coating, and a bulk Micromegas on a pad-segmented anode; the signals are read-out by analog APV-25-based F-E. The status of the technology is summarized, the possible developments and improvements are described.

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