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RPC based tracking system at CERN GIF++ facility

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With the HL-LHC upgrade of the LHC machine, an increase of the instantaneous luminosity by a factor of five is expected and the current detection systems need to be validated for such working conditions to ensure stable data taking. At the CERN Gamma Irradiation Facility (GIF++) many muon detectors undergo such studies, but the high gamma background can pose a challenge to the muon trigger system which is exposed to many fake hits from the gamma background. A tracking system using RPCs is implemented to clean the fake hits, taking profit of the high muon efficiency of these chambers. This work will present the tracking system configuration, used detector analysis algorithm and results.

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