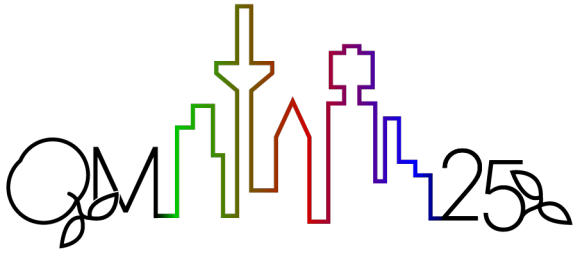

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Measurement of the g-2 factor of the tau lepton in ultraperipheral Pb-Pb collisions recorded by the CMS experiment

Measurements of the anomalous magnetic moment of leptons provide stringent tests of the Standard Model and potential hints of physics beyond the Standard Model. These measurements for electrons and muons are among the most precisely measured quantities in physics. However, due to the short lifetime of the tau lepton, it is impossible to measure its anomalous magnetic moment through traditional methods, such as spin precession measurements. The CMS experiment follows a comprehensive approach to measure this quantity in complementary phase spaces of ultraperipheral heavy-ion collisions. We will report the latest measurements of the anomalous magnetic moment of the tau lepton using ultraperipheral PbPb collisions recorded by the CMS experiment during Run 2. In addition, the luminosity for PbPb running has been measured using the photo-production of muon pairs. This offers the promise of reducing systematic uncertainties on future measurements

Category

Experiment

Collaboration (if applicable)

CMS

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