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# Anomalous electromagnetic moments of $\tau$ lepton from $\gamma\gamma \to \tau^+\tau^-$ processes in ultrapheripheral Pb+Pb collisions at the LHC

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We discuss the sensitivity of the process in ultraperipheral Pb+Pb collisions on the anomalous magnetic ($a_\tau$) and electric ($d_\tau$) moments of $\tau$ lepton at LHC energies. We derive the corresponding cross sections by folding the elementary cross section with the heavy-ion photon fluxes and considering semi-leptonic decays of both $\tau$ leptons in the fiducial volume of ATLAS and CMS detectors. We present predictions for total and differential cross sections, and for the ratios to $\gamma\gamma \to e^+e^-(\mu^+\mu^-)$ process. These ratios allow to cancel theoretical and experimental uncertainties when performing precision measurements at the LHC. The expected limits on $a_\tau$ with existing Pb+Pb dataset are found to be better by a factor of two comparing to current best experimental limits and can be further improved by another factor of two at High Luminosity LHC.

[1] Mateusz Dyndal, Mariola Klusek-Gawenda, Matthias Schott and Antoni Szczurek,
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