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Leptogenesis in gauged U(1)_{Lµ-Lτ} model

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A neutral vector boson Z associated with the gauged $U(1)_{L_{\mu}-L_{\tau}}$ can explain the muon g – 2 anomaly without conflicting with experimental searches for the new particle. Under extensions of the Standard Model with the symmetry relating to lepton flavor, neutrino mass generation has been studied through the type-I seesaw mechanism with right-handed neutrinos. In this framework, it is natural to inquire if the introduced particles can also be responsible for the baryon asymmetry of the Universe. In this talk, we will discuss the breaking of $U(1)_{L_{\mu}-L_{\tau}}$ symmetry in cosmological history and the viability of leptogenesis with the decay of right-handed neutrinos.

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