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## The lepton anomalous magnetic moments

# physikalisches

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 16:00 Uhr  
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Since the pioneering experiments of Stern and Gerlach, we have made tremendous quantitative progress in the study of the coupling of leptons to a magnetic field. Over the years, this provided a way to verify theory progress such as relativistic quantum mechanics and quantum electrodynamics.

Currently, there exists an  $O(4\sigma)$  tension between theory and experiment for the muon anomalous magnetic moment and an  $O(2\sigma)$  tension for the electron.

I discuss the theory and experimental status and what we could learn about physics beyond the standard model of particle physics.



The BNL muon storage ring on its way to Fermilab (Credits: Brookhaven National Laboratory)