

Scalar bosons and the muon $g-2$ anomaly

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The muon anomalous magnetic moment $g-2$ deviates by more than three sigmas from the corresponding standard model (SM) prediction. It is possible that this experimental anomaly is a consequence of physics beyond the SM.

We calculate the radiative corrections to $g-2$ due to a neutral exotic scalar field and compare it with the current literature. We use this result to calculate the allowed regions in the parameter space at a 68% confidence level (i.e., 1 sigma).

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