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A Study of the anomalous magnetic moment of the muon computed from the Adler function

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We compute the Adler function from vacuum polarization data with twisted boundary conditions using numerical derivatives. The study is based on CLS ensembles with two flavours of $O(a)$ improved Wilson fermions. To describe the momentum dependence and to extrapolate the lattice data to the continuum limit and to the physical point, we perform a combined fit and compare our results for the Adler function to phenomenology. In addition, the Adler function provides an alternative method to compute the anomalous magnetic moment of the muon. We compare our results from this approach to a determination using a more standard method.

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