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## Finite volume effects in hadronic vacuum polarization

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We investigate finite volume effects in the hadronic vacuum polarization, with an eye toward the corresponding systematic error in the muon anomalous magnetic moment. While it is well known that leading-order chiral perturbation theory does not provide a good description of the hadronic vacuum polarization, it turns out that it gives a much better representation of finite volume effects. Indications are that finite volume effects cannot be ignored when the aim is a few percent level accuracy for the hadronic contribution to the muon anomalous magnetic moment, even when  $m_\pi L \sim 4$  and  $m_\pi \sim 200$  MeV.

**Primary author:** Prof. GOLTERMAN, Maarten (San Francisco State University)

**Co-authors:** Prof. AUBIN, Christopher (Fordham University); Mr CHAU, Peter (San Francisco State University); Prof. PERIS, Santiago (Universitat Autònoma de Barcelona); Prof. BLUM, Thomas (University of Connecticut)

**Presenter:** Prof. GOLTERMAN, Maarten (San Francisco State University)

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