

Finite-volume effects in HVP contribution to muon $g-2$

Wednesday, August 5, 2020 2:40 PM (20 minutes)

The leading finite-volume corrections to the HVP contribution to the muonic ($g-2$) are related to the forward Compton amplitude of the pion in a completely model-independent fashion. The developed formalism is able to capture a few leading contributions, up to errors of order $\exp(-wML)$ where $w \sim 1.93$ and M is the pion mass. By using models and χ PT for the forward Compton tensor, the finite-volume corrections are estimated for typical interesting volumes.

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Session Classification: Hadron Structure

Track Classification: Hadron Structure