

# Inaugural US Muon Collider Meeting

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Fermilab, August 7-9, 2024

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Contribution ID: 38

Type: **not specified**

## Lepton Flavor Violation: From Muon Decays to Muon Colliders

We study dimension-6 lepton flavor-violating (LFV) operators within the Standard Model Effective Field Theory (SMEFT). We analyze their signals at a high-energy muon collider and compare them to constraints from lepton flavor-violating Higgs and Z decays, as well as precision measurements of  $\tau$  and  $\mu$  decays. Low-energy bounds are assessed by matching onto the low-energy effective theory. Our analysis shows the complementarity of low- and high-energy constraints by considering various operator combinations and assumptions about flavor structure.

**Primary authors:** BAGHERIAN, Hengameh; FRASER, Katherine (Harvard University); HOMILLER, Samuel (Harvard); Dr ASADI, Pouya (University of Oregon); Dr LU, Qianshu (Institute for Advanced Study)

**Presenter:** BAGHERIAN, Hengameh

**Session Classification:** Poster Session and Reception