

Phenomenology 2021 Symposium



Contribution ID: 1278

Type: Flavor

Flavourful Feebly-Interacting Particles for flavour and $g-2$ anomalies

Tuesday, 25 May 2021 15:00 (15 minutes)

Flavourful Feebly-Interacting Particles (FIPs) in the MeV to GeV range have a strong impact on precision frontier observables ranging from rare meson decays to the lepton anomalous magnetic moments. We use an effective field theory approach “SM+X” along with the HEPfit package to study the effect of FIPs on B to K observables. We present an updated study of the available parameter space and constraints, focusing on FIP scenarios allowing for a simultaneous fit of both the $R_{K^{(*)}}$ and the $(g-2)_\mu$ anomalies. We further present an explicit UV realization.

Summary

Primary authors: DARMÉ, Luc Jean Marie (INFN - National Institute for Nuclear Physics); SESSOLO, Enrico Maria (NCBJ, Warsaw); FEDELE, Marco (KIT); Dr KOWALSKA, Kamila (National Centre for Nuclear Research)

Presenter: DARMÉ, Luc Jean Marie (INFN - National Institute for Nuclear Physics)

Session Classification: Flavor III