Contribution ID: **15** Type: **Contributed**

Hadronic structure in BSM searches with CKM unitarity

Wednesday, 7 June 2023 14:20 (20 minutes)

Precision tests of the Standard Model with beta decays and unitarity of the Cabibbo-Kobayashi-Maskawa quark mixing matrix offer a way to search for BSM signals, which is competitive and complementary to the collider searches. Currently, the CKM top-row unitarity constraint shows a deficit $\Delta_u = |V_{ud}|^2 + |V_{us}|^2 + |V_{ub}|^2 - 1 = -0.0015(7)$ which may point to possible New Physics contributions. To arrive to the impressive 10^{-4} precision, hadronic structure-dependent radiative corrections have to be under control. I review the current status of these SM corrections, and discuss the impact of future developments in theory and experiment.

Primary author: GORSHTEYN, Mikhail (Mainz University)

Presenter: GORSHTEYN, Mikhail (Mainz University)

Session Classification: Hadrons and physics beyond the standard model

Track Classification: Hadrons and physics beyond the standard model