

38th INTERNATIONAL CONFERENCE ON HIGH ENERGY PHYSICS

AUGUST 3 - 10, 2016 CHICAGO

Contribution ID: 430

Type: Oral Presentation

Lepton flavor (universality) violation in rare kaon decays (15' + 5')

Friday, 5 August 2016 10:40 (20 minutes)

Recent anomalies in the decays of *B*-mesons and the Higgs boson provide hints towards lepton flavor (universality) violating physics beyond the Standard Model. In this talk, we observe that 4-fermion operators which can explain the *B*-physics anomalies have corresponding analogs in the kaon sector, and we analyze their impact on $K \to \pi \ell \ell'$ and $K \to \ell \ell'$ decays ($\ell = \mu, e$). For these processes, we note the corresponding physics opportunities at the NA62 and KOTO experiments. In particular, assuming minimal flavor violation, we comment on the required improvements in sensitivity necessary to test the *B*-physics anomalies in the kaon sector.

Primary authors: CRIVELLIN, Andreas (CERN); D'AMBROSIO, Giancarlo; TUNSTALL, LEWIS (University of Bern); HOFERICHTER, Martin (Institute for Nuclear Theory, University of Washington)

Presenter: TUNSTALL, LEWIS (University of Bern)

Session Classification: Quark and Lepton Flavor Physics

Track Classification: Quark and Lepton Flavor Physics