



PHYSICS AND ASTRONOMY SEMINAR

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“New Results on V_{us} from Inclusive Hadronic Tau Decays”

Abstract

I describe new results on the determination of V_{us} from inclusive hadronic tau decay data. Such a determination is of heightened interest in view of recent hints of possible lepton-flavor-universality violation in semileptonic B decays. I describe an important theoretical systematic identified in the conventional implementation of the flavor-breaking sum rule determination, and a new implementation of this approach which cures these problems, produces larger V_{us} , and resolves the long-standing inclusive tau V_{us} puzzle. I also describe a new dispersive approach employing only strange tau decay data, with lattice data on the theory side, which is shown to have significantly reduced errors. Targets for experimental improvements in low-multiplicity strange distributions, of potential interest to the Belle II program, having the potential to make this method competitive with conventional K decay determinations, will also be discussed.

Tuesday, October 10, 2017

2:30 p.m.

Elliot Building

Room 161