

Physics Colloquium

How Strange is the Proton? A collection of interesting puzzles for the LHC

Fredrick Olness
Department of Physics, Southern Methodist University

Although we've been measuring the structure of the proton for decades, the strange-quark content of the proton (as well as the heavier c and b flavors) is relatively unconstrained. The broad kinematic reach of the Large Hadron Collider (LHC) increases the role of the heavy quark components; this has important implications for the LHC "benchmark" processes such as W and Z boson production which are a crucial stepping stone to the Higgs discovery. We review the recent data as well as theoretical advances which enable an enhanced analysis of the upcoming LHC data.

**Thursday, September 17, 3:30pm,
SCI 234**

refreshments will be served in Sci 103 at 3:00pm