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Kaon physics in the NA62 era

mercredi 10 mars 2010 09:30 (15 minutes)

With about 10^13 charged kaon decays, the NA62 experiment at CERN will open a new frontier. In this talk, its physics reach will be briefly reviewed, as well as its relevance in the LHC era. We will start with the main goal of NA62, the rare decay K+ —> pi+ nu anti-nu, and show how essential it is to investigate the flavor structures of any New Physics theory found at the LHC. Then, the tremendous luminosity opens many new opportunities to either probe for new physics or to learn about QCD at low-energy. This will be illustrated by several examples of rare, radiative, (semi)leptonic, and hadronic decays. Finally, we will argue that a future extension of NA62 to a neutral beam is crucial, especially if some new physics is found at the LHC.

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Classification de Session: Rare processes as probes of beyond the SM

Classification de thématique: Theory