

Outline for: “Present status and future prospects in Kaon physics”

First Lecture:

The physics case for precision measurements in the kaon system: CPT tests (A_T, δ_e, η) Unitarity tests of the CKM matrix (V_{us}), CP studies ($\epsilon'/\epsilon, \pi\pi\epsilon$).

- i) Experimental challenges and techniques to achieve these precision measure
- ii) Results and Prospects.

Second Lecture:

The physics case for measurement of rare and ultra-rare kaon decays: $K \Rightarrow \pi e e, \pi \mu \mu, \pi \nu \nu$. Lepton Flavor Violation channels and other rare decay probes.

- i) Experimental challenges and techniques to reach the Sensitivity Frontier.
- ii) Results and Prospects.