

KLOE measurement of the charged kaon absolute semileptonic BR's

lunedì 21 maggio 2007 17:50 (20 minuti)

The semileptonic BR's are relevant for the evaluation of the CKM matrix element $|V_{us}|$. The measurement of the branching ratios for the charged K semileptonic decays uses four independent samples tagged by the following kaon decays: $K^+ \rightarrow \mu^+ \nu$, $K^+ \rightarrow \pi^+ \nu$, $K^- \rightarrow \mu^- \nu$, and $K^- \rightarrow \pi^- \nu$. Using 410 pb⁻¹ of total integrated luminosity (2.5 fb⁻¹), about 60 million tag decays have been identified and divided into the four tag samples. This redundancy allows to keep under control the systematic effects due to the tag selection. The BR is evaluated separately for each tag sample, dividing by the number of tag counts and correcting for acceptances. The latter are obtained from MC simulations. Corrections are applied to account for data-MC differences in tracking and clustering. $K^+ \rightarrow e^+ \nu$ and $K^+ \rightarrow \mu^+ \nu$ decays are selected, using kinematical cuts in the kaon rest frame and time of flight particle identification. The measurement of these BR's will be presented.

Relatore: Dr. SCIASCIA, Barbara (LNF - INFN, Frascati)

Classifica Sessioni: Session I

Classificazione della track: V_{us} and V_{ud}