



Contribution ID: 13

Type: **Non-Invited Talk**

search for K^+ to π^+ $\nu \nu$ at CERN

Thursday 29 November 2018 16:55 (25 minutes)

The decay $K^+ \rightarrow \pi^+ \nu \nu$, with a very precisely predicted branching ratio of less than 10^{-10} , is one of the best candidates to reveal indirect effects of new physics at the highest mass scales. The NA62 experiment at CERN SPS is designed to measure the branching ratio of the $K^+ \rightarrow \pi^+ \nu \nu$ with a decay-in-flight technique, novel for this channel. NA62 took data in 2016, 2017 and another year run is scheduled in 2018. Statistics collected in 2016 allows NA62 to reach the Standard Model sensitivity for $K^+ \rightarrow \pi^+ \nu \nu$, entering the domain of 10^{-10} single event sensitivity and showing the proof of principle of the experiment. The analysis data is reviewed and the preliminary result from the 2016 data set presented.

Content of the contribution

Experiment

Author: LAZZERONI, Cristina (University of Birmingham (GB))**Presenter:** KUCEROVA, Zuzana (Comenius University (SK))**Session Classification:** Discrete symmetries and models of flavour mixing**Track Classification:** [5] Discrete symmetries and models of flavour mixing