



ID de Contribution: 172

Type: **Ordinary**

## ” $K^+ \rightarrow \pi^+ \nu \bar{\nu}$ : first NA62 results”

*dimanche 11 mars 2018 19:40 (15 minutes)*

The decay  $K^+ \rightarrow \pi^+ \nu \bar{\nu}$  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  $K^+ \rightarrow \pi^+ \nu \bar{\nu}$  with a decay-in-flight technique, novel for this channel. NA62 has taken data firstly in 2016 with the aim to reach the SM sensitivity, it has then collected 10 times more statistics in 2017 and a similar amount of data is expected from the 2018 run. The preliminary result on  $K^+ \rightarrow \pi^+ \nu \bar{\nu}$  from the full 2016 data set is presented and prospects for future developments reviewed.

### Summary

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**Classification de Session:** Sunday Afternoon: Heavy Flavours (cont)