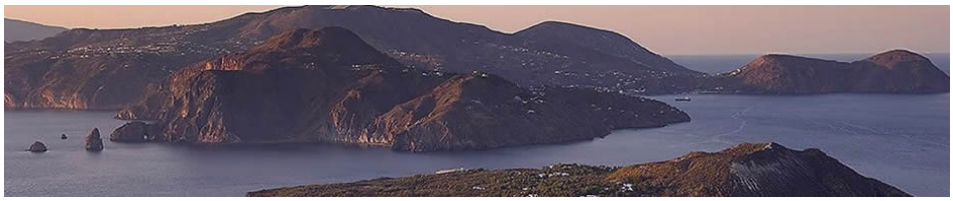

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$K^+ \to \pi^+ \nu\nu$: First Result from the NA62 Experiment at CERN

The decay $K^+ \to \pi^+ \nu\nu$, 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 $K^+ \to \pi^+ \nu\nu$ 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 $K^+ \to \pi^+ \nu\nu$, entering the domain of 10^(-10) single event sensitivity and showing the proof of principle of the experiment. The preliminary result on $K^+ \to \pi^+ \nu\nu$ from the analysis of the 2016 data set is presented and prospects for future reviewed.

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