



SPEAKER: Giuseppe Ruggiero (CERN)
TITLE: **The NA62 Experiment at CERN: status and perspectives**
DATE: Tue 10/03/2015 11:00
PLACE: Filtration Plant

ABSTRACT

Kaon physics has been one of the key building blocks of the Standard Model and continues to play a fundamental role complementary to the direct searches for New Physics.

The ultra-rare decays $K^+ \rightarrow \pi^+ \nu \bar{\nu}$ and $K_L \rightarrow \pi^0 \nu \bar{\nu}$ are among the most sensitive probes of physics beyond the SM. The detection of these decay modes is

challenging because the branching ratios are predicted by the SM to be of order 10^{-10} . The NA62 experiment at the CERN SPS has been designed to precisely measure the branching fraction of the $K^+ \rightarrow \pi^+ \nu \bar{\nu}$ decay and took data for the first time during a 2-months pilot run in November-December 2014. This seminar will focus on the NA62 experiment status and perspectives with a first look at the 2014 data.