

## Searching for New Physics with the NA62 experiment

*Wednesday, 1 February 2017 12:00 (1 hour)*

$K^+ \rightarrow \pi^+ \nu \bar{\nu}$  is one of the theoretically cleanest meson decays with which to look for indirect effects of new physics, as a complement to searches at the LHC. The NA62 experiment at the CERN SPS is designed to measure the branching ratio of this decay with 10% precision. NA62 took data in pilot runs in 2014 and 2015 and in a physics run in 2016. The experiment is also collecting data to search for exotic processes, like lepton flavour and number violation and decays of hidden-sector particles. An overview of the experiment, a first look at the data collected for the  $K^+ \rightarrow \pi^+ \nu \bar{\nu}$  measurement, and prospects for search for exotic processes will be presented.

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