

## Recent results from the NA62 experiment at CERN

*Thursday, 4 August 2022 14:20 (25 minutes)*

The NA62 experiment at CERN collected world's largest dataset of charged kaon decays in 2016-2018, leading to the first observation of the ultra-rare  $K^+ \rightarrow \pi^+ \nu \nu$  decay based on 20 candidates. Dedicated trigger lines were employed for collection of di-lepton final states, which allowed establishing stringent upper limits on the rates lepton flavor and lepton number violating kaon decays. The dataset is also exploited to search for production of light feebly interacting particles (such as heavy neutral leptons) in kaon decays. Recent NA62 results based on the 2016-2018 dataset, and the prospects of the NA62 experiment, are presented.

### Attendance type

In-person presentation

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**Session Classification:** WG4: Muon Physics

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