

COLLOQUIUM

Results for searches of exotic particles with NA62 in beam-dump mode

Speaker **BABETTE DÖBRICH** (MPI Munich, Germany)



Abstract We report on the search for visible decays of exotic mediators from data taken in "beam-dump" mode with the NA62 experiment. The NA62 experiment, conceived to measure the rare decay of a charged Kaon into a pion and two neutrinos, can be run as a "beam-dump experiment" by removing the Kaon production target and moving the upstream collimators into a "closed" position. More than 10^{17} protons on target have been collected in this way during a week-long data-taking campaign by the NA62 experiment. We report on new results from analysis of this data, with a

particular emphasis on Dark Photon and Axion-like particle Models. We also discuss future prospects of such physics searches with NA62 and its possible successor HIKE.

22

11.00 am (CET)

FEBRUARY 2024

Zoom link: <https://stockholmuniversit.zoom.us/j/2461001998>