

First results for searches of exotic decays with NA62 in beam-dump mode

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We report on the search visible decays of exotic mediators from data taken in “beam-dump” mode with the NA62 experiment.

The NA62 experiment can be run as a “beam-dump experiment” by removing the Kaon production target and moving the upstream collimators into a “closed” position.

In 2021, more than 10^{17} protons on target have been collected in this way during a week-long data-taking campaign by the NA62 experiment. Using past experience, the upstream beam-line magnets were configured to sizably reduce background induced by ‘halo’ muons.

We report on the analysis results of this data, with a particular emphasis on Dark Photon Models.

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