

# Vulcano Workshop 2022 - Frontier Objects in Astrophysics and Particle Physics



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## NA62 results on Dark Sector searches

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NA62 is a precision physics experiment studying charged kaons and their decay products with an unprecedented accuracy (measurement of the  $K^+ \rightarrow \pi^+ \nu \bar{\nu}$  branching ratio of the order of  $10^{-11}$ ), allowing to probe indirectly new physics scales up to O(100) TeV. NA62 experiment also searches directly for weakly interacting particles of up to O(100) MeV masses in kaon decays and up to O(1) GeV masses when running in the beam dump mode. For both modes of direct searches, NA62 continues to collect data since 2021 after a successful 2016-18 run 1. Past results and future prospects are presented in this talk.

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