

Search for exotic particles at NA62

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The high-intensity setup, trigger system flexibility, and detector performance – high-frequency tracking of beam particles, redundant PID, ultra-high-efficiency photon vetoes — make NA62 particularly suitable for searching new-physics effect from different scenarios. Results from a search for invisible dark photons produced from π^0 decays are given. Fixed target experiments are a particularly useful tool in the search of very weakly coupled particles in the MeV-GeV range, which are of interest, e.g. as potential Dark Matter mediators. The NA62 experiment at the CERN SPS is currently taking data to measure rare kaon decays. Owing to the high beam-energy and a hermetic detector coverage, NA62 also has the opportunity to directly search for a plethora of long-lived beyond-the Standard Model particles, such as Axion-like Particles and Dark Photons. In this talk, we will review the status of this searches and give prospects for future data taking at NA62.

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