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# SEARCH FOR EXOTIC DECAYS WITH NA62

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The features of the NA62 experiment at the CERN SPS - high-intensity setup, trigger-system flexibility, high-frequency tracking of beam particles, redundant particle identification, and
ultra-high-efficiency photon vetoes - make it particularly suitable to search for long-lived, weakly-coupled particles within Beyond the Standard Model physics.
We report the results of a search for $\pi 0$ decays to one photon and an invisible massive dark photon. From a total of about 400$ million $\pi 0$ decays, no signal is observed beyond the expected fluctuation of the background and limits are set in the plane of the dark photon coupling to ordinary photon versus dark photon mass. Searches for Heavy Neutral Lepton (HNL) production in charged kaon decays using the data collected by the NA62 experiment are reported. Upper limits are established on the elements of the extended neutrino mixing matrix for HNL masses in the range 130-450 MeV, improving on the results from previous HNL production searches. Sensitivity results for production and decay searches of Axion-Like Particles are also presented.

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