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Search for new physics in kaon decays at NA62

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Rare kaon decays are among the most sensitive probes of both heavy and light new physics beyond the Standard Model description thanks to high precision of the Standard Model predictions, availability of very large datasets, and the relatively simple decay topologies. The NA62 experiment at CERN has reported the first observation of the ultra-rare $K^+ \to \pi^+ \nu\bar{\nu}$ decay, and is collecting data towards a 10% measurement of the decay rate. The experiment also performs a broad rare-decay and hidden-sector physics programme. Recent NA62 results (including a new search for production of hidden-sector mediators in kaon decays) are presented. The plans for kaon experiments at CERN beyond NA62 are discussed.

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