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The photon veto system in the NA62 experiment

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The rare decays $K \rightarrow \pi \nu \bar{\nu}$ are excellent processes to study the physics of flavour. Thanks to the GIM suppression, these decays give precision tests of the Standard Model and constraints for models of New Physics.

The collaboration of the NA62 experiment at the CERN SPS aims to collect $O(100)$ $K^+ \rightarrow \pi^+ \nu \bar{\nu}$ events in about 2 years of data taking to extract a 10% measurement of the CKM parameter $|V_{td}|$.

Since the signal consists of a single π^+ track, the guiding principles for the construction of the NA62 detectors are an accurate particle ID, precise timing and excellent veto efficiency. In particular, the veto inefficiency for photons from $K^+ \rightarrow \pi^+ \pi^0$ decays should be smaller than 10^{-8} .

The photon veto system consists of three detectors covering different angular regions: Large Angle Vetoes (LAV), Liquid krypton calorimeter (LKr) and Small Angle Veto (SAV).

In this talk the photon veto system of the NA62 experiment will be discussed with particular attention to the LAV detectors.

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