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The NA62 Hadron Calorimeter

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NA62 is a fixed target experiment located in the north area of the Prevessin CERN site.\\
The ambitious aim of the experiment is to measure the branching ratio (BR) of the very rare decay $K^+ \to \pi^+ \nu\bar{\nu}$ within 10% precision using the
decay in flight technique.\\
The branching ratio of such a rare decay is very
well calculated in the standard model as $(9.11 \pm 0.72) \times 10^{-11}$ and
the measurement of this channel represents one of the most promising field for the search of new physics beyond the standard model.\\
The presence of just one detectable track in the final state represents one of the most challenging component on the experimental point of view.
The full kinematic reconstruction of the decay allows a strong background suppression.
Still the detector resolution, combined with the tiny branching ratio of the signal,
makes the $K^+ \to \mu^+ \nu$ decay (whose BR is 0.64) a critical source of background.\\
The NA62 detector was therefore designed to perform an excellent π/μ separation using a very efficient particle identification (PID) system. A major role in the PID is played by the calorimeters that
provides a muon rejection factor of the order of 10^5 through the measurement of energy and shape of the hadronic showers.\\
The calorimetric system consist of the electromagnetic calorimeter (LKr) filled with liquid krypton and the hadron calorimeter (HAC).\\
This presentation, after illustrating the HAC structure, will report on the calibration procedure of the detector response
and the preliminary performance results of the hadronic energy reconstruction.

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