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NA62 High Level Trigger strategy

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The NA62 is a fixed target experiment located at CERN Super Proton Synchrotron (SPS). The main experiment goal is to measure the $K+\rightarrow\pi+\nu\nu$ with 10% of accuracy. This decay is a neutral weak current with a quark flavor violation highly suppressed by the GIM mechanism. Its branching ratio is predicted by the Standard Model with unusual precision (estimated to 8.4x10-11). In order to measure this tiny branching ratio a very efficient Trigger and Data Acquisition (TDAQ) chain is mandatory. The event building and the on-line High Level Trigger (HLT) are performed by a small cluster of computer running custom C++ software. The HLT aims at reducing the raw data rate from ~1MHz to ~10KHz and it actually relies on multi track event rejection. The full event is completed with the calorimeter information only if it receives a positive response from the HLT. An overview of the HLT strategy will be presented.

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