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## Measurement of the ratio of charged kaon leptonic decay rates at NA62

*Thursday, 12 September 2013 10:00 (20 minutes)*

A lepton universality test by measurement of the helicity suppressed ratio  $R_K$  of leptonic decay rates of the charged kaon has been performed by the NA62 experiment. A precision measurement of the ratio  $R_K$  of the rates of kaon leptonic decays  $K^{+-}$  to  $e^{+-} \nu$  and  $K^{+-}$  to  $\mu^{+-} \nu$  with the full minimum bias data sample collected with low intensity 75 GeV/c beam by the NA62 experiment at CERN in 2007-2008 is reported. The result, obtained by analyzing ~150,000 reconstructed  $K^{+-}$  to  $e^{+-} \nu$  candidates with 11% background contamination, has a record precision of 0.4% and is in agreement with the Standard Model expectation. The record accuracy of 0.4% constrains the parameter space of new physics models with extended Higgs sector, a fourth generation of quarks and leptons or sterile neutrinos.

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