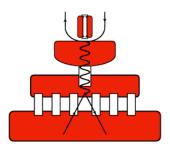
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Results and prospects from the PIENU experiment

Thursday 12 September 2019 15:20 (20 minutes)

The PIENU experiment at TRIUMF aims to measure the branching ratio, R_{e/mu;} = Gamma;(pi;⁺ rarr; e⁺⁺nu;(gamma;))/Gamma;(pi;⁺⁺ rarr; mu;⁺⁺nu;(gamma;)), with 0.1 providing the most precise test of the lepton universarity. The collaboration collected physics data during 2009–2012, and the result of R_{e/mu;} based on part of the 2010 data was published in 2015. The analysis of the full data set (10⁷ of pi;⁺⁺ rarr; e⁺⁺ nu; decays) with 0.1

The search for heavy neutrinos in pi;rarr;enu; and pi;rarr;mu;nu; decays were also performed using the high statistics pion-decay data we had accumulated. The results were published in 2018 for pi;rarr;enu; and accepted-for-publication for pi;rarr;mu;nu;.

The result of the heavy neutrinos search and the updated status of the R_{e/mu;} analysis with the full data set will be presented.

Presenter: AOKI, Masaharu (Osaka University) **Session Classification:** Other rare decays