

The Mu3e Experiment at PSI

Thursday, 12 September 2013 15:35 (20 minutes)

The lepton flavor violation decay $\mu \rightarrow eee$ provides an excellent testing ground for physics beyond the SM. This process being experimentally excluded with $\text{Br}(\mu \rightarrow eee) < 10^{-12}$ (90% CL), the Mu3e collaboration aims at improving the sensitivity of the former SINDRUM experiment by four orders of magnitude down to 10^{-16} by exploiting novel detector technologies. The physics motivation for a dedicated LFV search in the $\mu \rightarrow eee$ channel is given and the status of the Mu3e experiment is reported. Emphasis will be put on new detector developments like the HV-MAPS silicon pixel technology which offers many new opportunities for high rate experiments at low energy.

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Session Classification: Th - 3