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Charged lepton mixing - an experimental overview

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Exploring the flavor sector of the Standard Model has always been a powerful probe in particle physics. Searches for charged leptons mixing, in particular muon decays, effectively pioneered this program almost 100 years ago. Still, even what one might consider, naively, simple questions, like why three lepton generations, are left unanswered. We do know now that neutral leptons (neutrinos) mix. We also know that, in all likelihood, the physics behind charged lepton mixing is also somehow responsible for generating neutrino masses. Not surprisingly, a revived interest in this field is currently under way, with experiments either ongoing or at planning stage throughout the world. The advent of powerful high intensity beams opens up new venues for exploration. Coupled with clever experimental ideas, sensitivities that were previously impossible to attain, are now within reach. I will review here the current status of charged lepton mixing experiments, what should we expect from the next generation projects and my view on how the field will progress in the future.