

The MEG final result. Towards MEGII

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Lepton flavor violation (LFV) research is currently one of the most exciting branches of particle physics due to its high sensitivity to new physics. The observation of neutrino oscillations has clearly demonstrated that neutral lepton flavor is not conserved. This implies that charged LFV (cLFV) processes, such as the $\mu^+ \rightarrow e^+ \gamma$ decay, can also occur in the Standard Model (SM), although strongly suppressed. On the other hand, Beyond SM (BSM) extensions strongly enhance the predictions for cLFV branching ratios. Therefore such decays are ideal probes for new physics. The MEG experiment at the Paul Scherrer Institut searches for the $\mu^+ \rightarrow e^+ \gamma$ decay and has completed the data collection at the end of the 2013. The final result will be discussed and the status of the upgrade of the experiment (MEGII) will be presented.

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