

Search for lepton flavor violating decay of muon in MEG experiment

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Charged lepton flavor violation (CLFV) is prohibited in SM. On the other hand, detectable branching ratio is predicted in many BSM models, and experimental searches have been performed to find a clue for BSM. MEG experiment has searched for one of the major CLFV process, $\mu \rightarrow e\gamma$, by utilizing innovative detector and world most intense DC muon beam at Paul Scherrer Institut. Full data set of MEG has been analyzed, and it set the upper limit of 4.2×10^{-13} to the branching ratio of $\mu \rightarrow e\gamma$, which is 30 times better than the previous result given by MEGA experiment.

To further improve the sensitivity by one order of magnitude, upgraded experiment, called MEG II, is in preparation. All the detectors have been upgraded to achieve twice better detector resolutions, and detector commissioning is ongoing. Engineering of MEG II is planned in 2019, followed by the a few years of physics data taking.

In this talk, result of MEG and recent status of MEG II will be reported.

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