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Final results of the MEG experiment and status of MEG II

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The MEG experiment at PSI searched for the lepton-flavour violating decay $\mu \rightarrow e \gamma$ with unprecedented sensitivity. The experiment ran for 5 years from 2009 to 2013 and it already set the most stringent experimental bound to date to be $< 5.7 \times 10^{-13}$ with an associated sensitivity of about 7.7×10^{-13} from half of the statistics. I will present the MEG final result which has an associated sensitivity of 5.3×10^{-13} based on the analysis of the whole data sample.

An experiment upgrade is conceived in order to further improve the sensitivity by at least one order of magnitude in three years of data taking. It will take benefit of the MEG infrastructures as the beam lines, the magnet and the calorimeter cryostat and technology, while the detectors and the TDAQ electronics were re-designed to cope with a doubled muon stopping rate. The MEG II experiment is currently under construction, the commissioning is foreseen between the end of this year and the first months of 2017. I will overview the new detector and describe the most important improvements.

Summary

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