

# BSM search in rare muon decay: the MEG II experiment

*Friday, 31 July 2020 08:30 (15 minutes)*

Lepton flavor violating decay of muon is one of the best probes for physics beyond the Standard Model (bSM). A golden channel,  $\mu \rightarrow e\gamma$ , will be searched by the MEG II experiment. MEG II aims to search  $\mu \rightarrow e\gamma$  with ten times better branching ratio sensitivity than MEG,  $6 \times 10^{-14}$  (90% C.L.). Many well motivated bSM theories predict sizable branching ratio of this decay (e.g.  $\mathcal{O}(10^{-14})$  in SUSY-seesaw), which is within the reach of MEG II.

MEG II utilizes world's highest intensity continuous  $\mu^+$  beam ( $7 \times 10^7$  muons/sec.) at Paul Scherrer Institute (PSI). In order to cope with extremely high rate accidental background of  $e^+$  and  $\gamma$ , all the detectors are upgraded from MEG. Detectors are installed and commissioned with muon beam at PSI. We present the status and prospect of the MEG II experiment.

## I read the instructions

## Secondary track (number)

**Primary author:** IEKI, Kei (University of Tokyo (JP))

**Presenter:** IEKI, Kei (University of Tokyo (JP))

**Session Classification:** Quark and Lepton Flavour Physics

**Track Classification:** 05. Quark and Lepton Flavour Physics