Latest results of $\mu \to e \gamma$ search with the MEG II experiment

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The MEG II experiment searches for the lepton-flavor-violating muon decay, $\mu^+ \rightarrow e^+\gamma$, utilizing the most intense continuous muon beam at Paul Scherrer Institut and innovative high-resolution detectors, with a target sensitivity of 6×10^{-14} . The experiment started collecting physics data in 2021 and has been accumulating statistics. The latest result, based on the data collected in 2021 and 2022, has achieved the most sensitive search to date. No signal excess was found, and the most stringent upper limit on the branching ratio was set to 1.5×10^{-13} at the 90% confidence level. We will reach the sensitivity goal with further data acquisition anticipated by 2026 and analysis improvements. This presentation will provide the latest results and the prospects of the $\mu^+ \rightarrow e^+\gamma$ search with the MEG II experiment.

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