

New results from the MEG II experiment and liquid xenon calorimetry

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The MEG II experiment has collected physics data since 2021 to search for the lepton-flavor-violating muon decay, $\mu^+ \rightarrow e^+\gamma$, with a target sensitivity of 6×10^{-14} . The latest result, based on the first two years of data, 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 have developed the liquid xenon calorimetry to precisely measure 52.8 MeV γ -rays since the predecessor experiment, MEG. This presentation will give new results from the MEG II experiment and the technologies of liquid xenon calorimetry.

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