

The new result on the $\mu \rightarrow e \gamma$ search with the MEGII experiment

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This talk reports the result of the search for the decay $\mu \rightarrow e \gamma$ undertaken at the Paul Scherrer Institut in Switzerland with the MEG II experiment using the data collected in the 2021- 2022 physics runs. The sensitivity of this search is 2.2×10^{-13} , a factor of 2.4 better than that of the full MEG dataset and obtained in a data taking period of about one fourth that of MEG, thanks to the superior performances of the new detector. The result is consistent with the expected background, yielding an upper limit on the branching ratio of $B(\mu \rightarrow e \gamma) < 1.5 \times 10^{-13}$ (90 % C.L.). Additional improvements are expected with the data collected during the years 2023-2024. The data-taking will continue in the coming years. A status of other searches and of the experiment will be given.

Primary author: PAPA, Angela (PSI&UNIFI-INFN)

Presenter: PAPA, Angela (PSI&UNIFI-INFN)

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