

# XeSAT2023 - International Workshop on Applications of Noble Gas Xenon to Science and Technology



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## The MEG II Experiment

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### L. Gerritzen, on behalf of the MEG II collaboration

The MEG II experiment [1] searches for the charged lepton flavor-violating decay  $\mu^+ \rightarrow e^+ \gamma$ , building on the MEG experiment with enhanced detector performance and an order of magnitude improvement in sensitivity over the previous result [2]. The 900-litre liquid xenon (LXe) calorimeter of MEG, used to detect 53 MeV photons, has been upgraded with 4092 large-area VUV-sensitive silicon photomultipliers (SiPMs) [3] in addition to 668 photomultiplier tubes.

In 2022, MEG II achieved the longest run in the history of MEG and MEG II. In addition, successful annealing of the SiPMs could be demonstrated and was repeated in 2023. This talk will present the latest results from the MEG II experiment with a special focus on the LXe calorimeter.

#### References

- [1] Baldini, A. et al., Eur. Phys. J. C 78, 380 (2018).
- [2] Baldini, A. et al., Eur. Phys. J. C 76, 434 (2016).
- [3]. Ieki, K. et al., Nucl. Instrum. Methods. Phys. Res. A925, 148 (2019)

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