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The MEGII detector

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Content

An overview of the conceptual design and construction status of the detector for the MEGII experiment, the upgrade of MEG, is presented. MEGII is designed to search for the $\mu^+ \to e^+$ decay with a sensitivity an order of magnitude better than MEG down to 5×10^{-14}. To achieve this sensitivity a muon decay rate a factor of two higher is required. The detector resolution on all physical parameters is expected to improve of a factor of two. The detector has been substantially redesigned to cope with the highest muon decay rate expected. Some detector components have been upgraded (calorimetry, beam line, calibration), others redesigned completely (drift chamber, timing counter), others added (Radiative decay counter). All main detector components are presented emphasizing the improvements with MEG. An estimate of the expected final sensitivity is presented.

Summary

An overview of the conceptual design and construction status of the detector for the MEGII experiment, the upgrade of MEG, is presented. The detector has been substantially redesigned to cope with the highest muon decay rate expected. All main detector components are presented emphasizing the improvements with MEG.

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