

Search for the decay $\mu \rightarrow e\gamma$ in the MEG experiment

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The MEG experiment is currently searching for the lepton-flavor-changing decay $\mu \rightarrow e\gamma$. Flavor mixing in the neutrino sector, which is implied by neutrino oscillations, leads to too small branching ratio of the $\mu \rightarrow e\gamma$ in the Standard Model to be observed. Many extensions of the Standard Model such as Supersymmetric theories, however, bring the branching ratio of the decay within the reach of the MEG. We started the physics data taking in 2008 with a high precision liquid xenon gamma-ray detector and a positron spectrometer with a gradient magnetic field. A preliminary result from the analysis on the data 2009 will be presented together with the current status and the future prospects of the experiment.

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