Calibration tools for the MEG-II experiment

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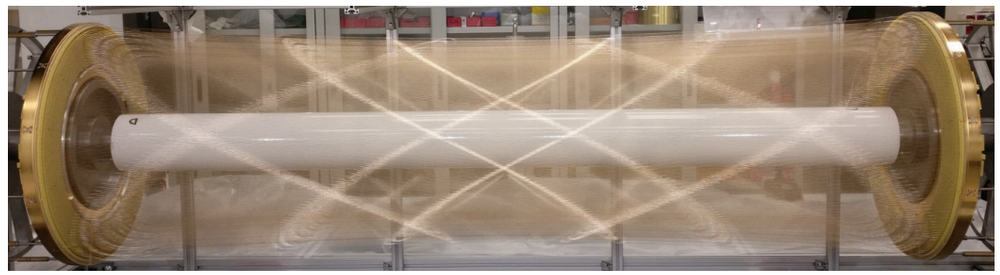
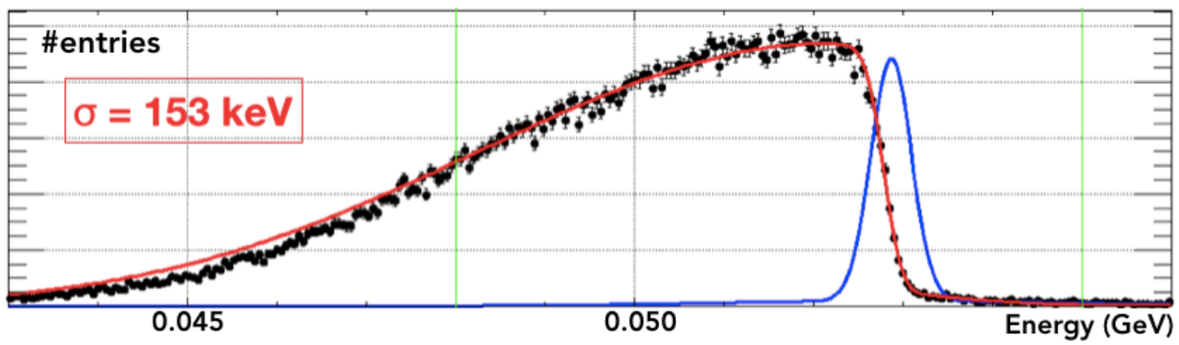
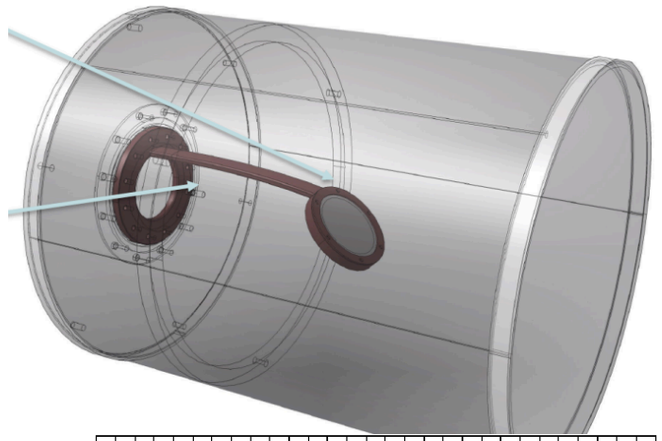
- The MEG-II experiment is looking for the rare $\mu^+ \to e^+\gamma$ decay. To achieve a 6e-14 branching ratio upper limit, the calibration of the state-of-the-art cylindrical drift chamber is critical.





- Complementary and redundant methods are used for that purpose: cosmic rays, Mott positrons and fits of the Michel spectrum edge.

- A novel idea to evaluate the basic parameters of the CDCH (active cells, working channels, gain alignment) is to make use of the 17.6 MeV Li line, obtained by sending protons on a lithium target. With magnet off and through External Pair Conversion, it leads to ~ 9 MeV e+ and e- straight tracks.



- With magnet on, the curved EPC tracks can be used to extract the particles' kinematic resolutions. Simulations are ongoing to compare the resolutions at high and low momenta.