

Abstract Submitted  
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**Kicker field simulation and measurement for the muon g-2 experiment at FNAL**<sup>1</sup> SEUNG PYO CHANG, KAIST , YOUNG IM KIM, JIHOON CHOI, YANNIS SEMERTZIDIS, Center for Axion and Precision Physics Research, Institute for Basic Science, MUON G-2 EXPERIMENT COLLABORATION — In the Muon g-2 experiment, muon beam is injected to the storage ring in a slightly tilted orbit whose center is 77 mm away from the center of the ring. The kicker is needed to send the muon beam to the central orbit. The magnetic kicker is designed for the experiment and about 0.1 Tm field integral is needed. The peak current pulse is 4200 A to make this field integral. This strong kicker pulse could make unwanted eddy current occur. This eddy current could spoil the main magnetic field of the storage ring. This could be a critical threat to the precision of experiment. The kicker field simulation has done using OPERA to estimate the effects. Also the kicker field should be measured based on Faraday effect. The measurement has tested in the lab before install the experiment area. In this presentation, the simulation and measurement results will be discussed.

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