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Electric field effects on the muon anomalous precession frequency in the Fermilab Muon g-2 Experiment WANWEI WU, Univ of Mississippi, THE FERMILAB MUON G-2 EXPERIMENT COLLABORATION — The muon anomalous magnetic moment (g-2) has played an important role in constraining physics beyond the Standard Model for many years. The Fermilab Muon g-2 Experiment has a goal to measure it to unprecedented precision: 0.14 ppm. To achieve this goal, we need to understand the systematic uncertainties associated with beam dynamics. We will present a study of the electric field correction to the muon anomalous precession frequency based on fast rotation analysis, which uses the evolution of beam bunch structure to determine the muon momentum distribution.

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