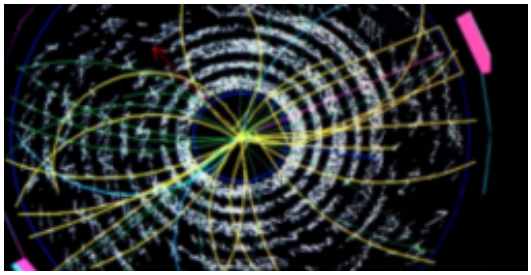

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Extension Upgrade to the Muon g-2 Electrostatic Quadrupole System

Tuesday, 6 June 2017 16:30 (15 minutes)

The Muon g-2 experiment uses electrostatic quadrupoles for vertical focusing in the muon storage ring. High voltage (HV) feedthroughs provide electrical contact across the vacuum-air interface. Trapped electrons drift in the direction of the cross product between the electric and magnetic fields. These electrons drift along the quadrupole HV leads and eventually damage the HV feedthrough insulators on the vacuum side. Damaging these insulators increases the likelihood of sparking in the Quadrupole System. HV feedthrough extensions are used to position the HV feedthroughs in a low magnetic field region, thereby eliminating the trapped electrons that cause damage. The design and installation of the HV feedthrough extensions are presented in this poster.

Primary authors: Dr NGUYEN, Hogan (Fermilab); Dr CRNKOVIC, Jason D. (BROOKHAVEN NATIONAL LABORATORY); TISHCHENKO, Vladimir (BNL); Mr WU, Wanwei (University of Mississippi)

Co-authors: Mr HERROD, Alexander T. (THE COCKCROFT INSTITUTE and University of Liverpool); Mr SCHMIDT, Eric F. (Embry-Riddle Aeronautical University); Dr RAMBERG, Erik (Fermi National Accelerator Laboratory); Ms YUCEL, Esra B. (ISTANBUL TECHNICAL UNIVERSITY); Mr YUCEL, Mete (ISTANBUL TECHNICAL UNIVERSITY); Dr MORSE, William (BNL)

Presenter: Ms YUCEL, Esra B. (ISTANBUL TECHNICAL UNIVERSITY)

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