Contribution ID: **51**   Type: **Oral**

Simulation of Resonant Extraction at Fermilab's Delivery Ring

Monday, 10 June 2019 11:15 (15 minutes)

The Muon Campus at Fermilab presently houses two experiments that aim to find discrepancies (if any) in the Standard Model. The Delivery Ring is a 500m circumference storage ring which is used to deliver protons to muon experiments Muon g-2 and Mu2e. Although these experiments are based on the same particle, they require different intensities because of their detector constraints. For the Mu2e case, resonant extraction is the method used for introducing small perturbations in the transverse magnetic field of the ring in order to provide controlled extraction of protons depending upon the required particle rates at the target. Work presented here will be an analysis and simulation of resonant extraction at the Delivery Ring using the beam parameters of Mu2e to study various factors that contribute to its successful use, including meeting intensity requirements while keeping beam losses to a minimum.

Summary

Preliminary results and future goals will be presented.

Primary author: Mr CHINTALAPATI, Prudhvi Raj Varma (Chintalapati)

Co-author: SYPHERS, Mike (Northern Illinois University / Fermilab)

Presenter: Mr CHINTALAPATI, Prudhvi Raj Varma (Chintalapati)

Session Classification: Monday Morning II