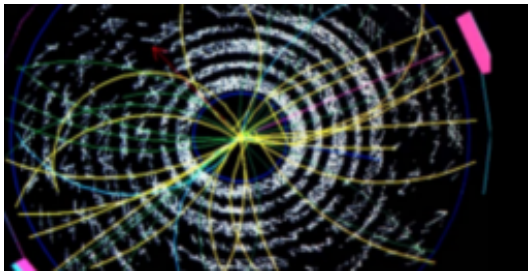

Contribution ID: **32** Type: **Oral Presentation**

Electron Neutrino Events in MicroBooNE originating from the NuMI Beamline

Monday, 5 June 2017 09:45 (15 minutes)

MicroBooNE is a liquid argon neutrino detector at the Fermi National Accelerator Laboratory with the unique feature to simultaneously receive neutrinos from both Fermilab neutrino beams. The electron neutrino search from the lower-energy on-axis BNB will address MicroBooNE's signature analysis investigating the low-energy electromagnetic event excess previously observed by the MiniBooNE experiment. The higher-energy neutrinos from the NuMI beam reaching the MicroBooNE detector off-axis, will be primarily used for a comprehensive understanding of electron neutrino interactions and a νe cross section measurement on Liquid Argon. These measurements using the NuMI neutrinos will be crucial for reducing cross section systematics for current and future oscillation measurements at short and long baselines. We will present ongoing simulation studies of the signal and backgrounds leading towards a measurement of the νe cross section on argon.

Primary author: HILL, Colton (The University of Manchester)

Presenter: HILL, Colton (The University of Manchester)

Session Classification: Short Baseline Neutrino Program