Contribution ID: **402** Type: **Poster cross sections**

Search for NC single photon events in MicroBooNE

MicroBooNE, an 85 metric ton (active mass) liquid argon time projection chamber (TPC), began studying neutrino interactions on the Fermilab Booster Neutrino Beamline (BNB) in October 2015. One of its primary physics goals is to investigate the Low Energy Excess of events previously observed by the MiniBooNE experiment, which could be single-electron or single-photon in nature. Neutrino neutral current resonant Delta baryon production, with subsequent Delta radiative decay, is a standard model source of low energy single-photon events that could constitute the origin of this excess. This poster will describe the analysis developed to search for neutral current Delta radiative events in MicroBooNE, with the goal of testing the hypothesis that the source of the MiniBooNE excess is neutral current Delta baryon production and radiative decay. MicroBooNE's ability to measure the rate of neutral current Delta radiative decay will also be presented.

Session and Location

Wednesday Session, Poster Wall #115 (Auditorium Gallery Left)

Poster included in proceedings:

yes

Primary author: Mr MURRELLS, Robert (University of Manchester)

Presenter: Mr MURRELLS, Robert (University of Manchester)

Track Classification: Poster (not participating in poster prize competition)