Poster session 2 – Tuesday 5 July

P2.079 **Vertex reconstruction algorithm development for the MicroBooNE single photon event search**

M Toups[1], M Weber[2] and R Murrells[3]

[1]Fermi National Accelerator Laboratory, USA, [2]Laboratorium fuer Hochenergiephysik - Universitaet Bern, Germany, [3]University of Manchester, UK

on behalf of MicroBooNE collaboration

MicroBooNE, an 89 ton (active volume) liquid argon time projection chamber (TPC), began studying neutrino interactions in the Fermilab Booster Neutrino Beamline (BNB) in October 2015. One of its primary physics goals is to investigate the MiniBooNE electromagnetic "Low Energy Excess". One of the leading interpretations of this excess is single photon production in neutrino neutral current (NC) interactions with nuclei. This poster presents a vertex reconstruction algorithm developed and optimized for the MicroBooNE single-photon search, which aims to investigate the MiniBooNE excess under the single photon interpretation.