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Precision Measurement of Charged Current Neutral Pion Production in Neutrino-Argon Interactions with the MicroBooNE detector SUPRAJA BALASUBRAMANIAN, Fermilab, MICROBOONE COLLABORATION — MicroBooNE is an 85-ton active-mass liquid argon time projection chamber located on the Booster Neutrino Beam at Fermi National Accelerator Laboratory. The primary goal of MicroBooNE is to investigate an apparent excess of low-energy electromagnetic events observed by the MiniBooNE experiment in muon neutrino-to-electron neutrino oscillations. A significant background for this study are photon showers from neutral pion decay, which can mimic the electromagnetic shower signature of electrons from electron neutrinos. In this talk, I will present the latest differential cross-section measurements of neutral pions produced in charged current muon neutrino interactions in MicroBooNE, with a particular focus on the kinematics of the outgoing lepton and pion final states.

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