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Inelastic Single Pion Signal Study in T2K ν_e Appearance using Modified Decay Electron Cut KONOSUKE IWAMOTO, Univ of Rochester, T2K COLLABORATION — The T2K long-baseline neutrino experiment uses sophisticated selection criteria to identify the neutrino oscillation signals among the events reconstructed in the Super-Kamiokande (SK) detector for ν_e and ν_μ appearance and disappearance analyses. In current analyses, charged-current quasi-elastic (CCQE) events are used as the signal reaction in the SK detector because the energy can be precisely reconstructed. This talk presents an approach to increase the statistics of the oscillation analysis by including non-CCQE events with one Michel electron and reconstruct them as the inelastic single pion productions. The increase in statistics, backgrounds to this new process and energy reconstruction implications will be presented with this increased event sample.

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