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Muon anti-neutrino inclusive charged-current interactions in the T2K near detector

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The muon neutrino beam of the T2K neutrino oscillation experiment contains a small contamination from anti-neutrinos. It is important to measure accurately this flux component since it: (a) forms a background to the oscillation measurements and; (b) gives the opportunity to study the poorly known anti-neutrino cross-section on carbon at neutrino energies of ˜1GeV. This talk will outline a selection of inclusive muon anti-neutrino charged-current interactions in the ND280 (T2K's near detector situated 280m from the neutrino production target) and will present a preliminary analysis to extract the neutrino to anti-neutrino cross-section ratio.

Author: LISTER, Callum (University of Warwick)

Presenter: LISTER, Callum (University of Warwick)

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