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The NuMu and anti-NuMu interaction rate measurements in the T2K near detector

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The neutrino oscillation measurement made by the Tokai-To-Kamioka (T2K) experiment relies greatly on the measurements of the neutrino flux and cross sections from its near detector, ND280.

This measurement will be even more crucial when T2K operates with an anti-neutrino beam to investigate CP violation in the neutrino sector. In this mode, the muon neutrino component of the beam will be a significant background for the oscillation measurement, whilst the muon anti-neutrino cross section is not very well known at the T2K neutrino energy peak.

This talk will present improvements to the ND280 analyses for the neutrino and anti-neutrino beams.

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