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## Antineutrino to neutrino charged-current interaction cross section ratio in MINERvA

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The neutrino and anti-neutrino charged-current inclusive cross sections are important ingredients for current and future neutrino oscillation experiments. MINERvA recently measured these cross sections on carbon, and their ratio, using data from the forward and reversed horn focusing modes of the Fermilab low-energy NuMI beamline. The flux prediction was obtained from a sample of charged-current events at low nuclear recoil energy ( $\nu$ ) along with precise higher energy external neutrino cross section data overlapping our energy regime. Common systematic uncertainties cancel in the extracted antineutrino-neutrino cross section ratio and reaches a precision of 5% at low energy since we benefit from the fact that the cross-sections are obtained within the same experiment using the same technique. This talk will discuss these results.

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