

# CU Physics Department Particle Seminar

Wednesday, February 24, 2010 831 Pupin Hall 2:30 PM

## Measurement of Neutral Current Neutral Pion Production in the SciBooNE experiment

It is essential for the neutrino oscillation experiments to understand the neutral pion production via neutrino-nucleus neutral current interaction in the neutrino energy region of a few GeV. In the seminar, we present the study of neutral current neutral pion production from muon neutrinos scattering on a polystyrene ( $C_8H_8$ ) target in the SciBooNE experiment. We measure the inclusive cross section of neutral current neutral pion production and pion kinematics distribution. The results agree with the Rein-Sehgal model, which is generally used for the Monte Carlo simulation by many neutrino oscillation experiments. In addition, we also present recent study about the coherent pion production.

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