

Abstract Submitted
for the CAL10 Meeting of
The American Physical Society

Comparison of Two Models HAROLD FAIRWEATHER, Physics Department CSUDH, KENNETH GANEZER, Cal State University of Dominguez Hills, CSUDH PHYSICS DEPARTMENT TEAM — A comparison of two different models for nuclear effects in oxygen-16 from the propagation of mesonic secondaries of neutron oscillations. In order to estimate uncertainties due to the reliability of the models, two such algorithms with slightly different physics assumptions and approaches were compared for various kinematic variables and interaction rates. We found that the differences in values of these parameters were very small and that the related distribution as approximately (1-2%) in the form of histograms and scatter plots were similar. We concluded that the differences between our two models with different but reasonable physical assumptions were relatively small and the models were both reliable. Our study validated earlier estimates of the nuclear model with dependent systematic errors in our neutron oscillation search to be 2%.

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Date submitted: 13 Oct 2010

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