Abstract Submitted
for the DNP15 Meeting of
The American Physical Society

3-Body Decay of Cluster States in ^{14}C ADAM FRITSCH, Gonzaga University, YASSID AYYAD LIMONGE, DANIEL BAZIN, SAUL BECEIRO-NOVO, JOSHUA BRADT, WOLFGANG MITTIG, National Superconducting Cyclotron Laboratory, Michigan State University, TAN AHN, ALAN HOWARD, J.J. KOLATA, University of Notre Dame, FRED BECCHETTI, University of Michigan, MICHAEL WOLFF, College of Wooster — The clustering of α particles in nuclei results in the self-organization of various geometrical arrangements, informing our understanding of nuclear structure and nuclear astrophysics. In a previous experiment, the Prototype Active-Target Time-Projection Chamber was used to investigate ^{14}C cluster structures by way of a 38 MeV secondary ^{10}Be beam incident on a 90:10 He:CO_2 active target gas at the University of Notre Dame. The ^{10}Be beam was produced by TwinSol and delivered to the Prototype AT-TPC. In addition to measuring elastic and inelastic ^{10}Be + α resonances, evidence of 3-body decays of ^{14}C were observed in the data. Thus, additional data were later taken with an updated trigger scheme more sensitive to 3-body ^{14}C decay events. Preliminary analysis of this data will be discussed and presented.

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Date submitted: 30 Jun 2015 Electronic form version 1.4