

Abstract Submitted
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DAE δ ALUS Target Design Optimization¹ TESS SMIDT, MIT, ROGER BARLOW, ADRIANA BUNGAU, University of Huddersfield, JANET CONRAD, MIT, DAEDALUS COLLABORATION — DAE δ ALUS, the Decay At-rest Experiment for δ_{CP} At the Laboratory for Underground Science will look for evidence of CP-violation in the neutrino sector, which may explain the matter/antimatter asymmetry in our universe. It will make precision measurements of oscillations of anti-muon neutrinos to anti-electron neutrinos using multiple neutrino sources created by low-cost compact cyclotrons. DAE δ ALUS will utilize a decay-at-rest neutrino beam produced by 800 MeV protons impacting a graphite target. Two well-established Monte Carlo codes, MARS and GEANT4, have been used to optimize the design and the performance of the target. A benchmarking of the results obtained with these codes will also be presented.

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