

Abstract Submitted
for the DNP20 Meeting of
The American Physical Society

Nuclear Isomer Gamma Emission Simulations in Geant4 AN-DREA BRACAMONTE, None — Nuclear isomers have a wide variety of applications, yet many properties, such as energy levels, are not well known. Energy levels are experimentally determined by detecting gamma emission from nuclear de-excitation. Through Monte Carlo simulations, this process has been simulated using various beam and target combinations in Geant4. A detector ring consisting of multiple scintillation detectors has been placed in optimal positions to specifically measure energy from gamma emissions. Using the analysis capabilities of CERN's Root, various physical phenomena have been observed. Since energy levels of neutron-rich isomers are not well identified, excitation states are of particular interest to better develop nuclear structure models.

Andrea Bracamonte
None

Date submitted: 31 Jul 2020

Electronic form version 1.4