

Abstract Submitted
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G4Beamline simulation for the study of ^{13}Be isomers YANNICK GUEYE, PAUL GUEYE, THOMAS BAUMANN, Michigan State University, MONA COLLABORATION COLLABORATION — The MoNA Collaboration will study neutron-unbound states of ^{13}Be in a dedicated experiment scheduled to run in September 2020 at the National Superconducting Cyclotron Laboratory. The experimental setup consists of a 76 MeV/u ^{14}Be incident beam that will impinge on a beryllium target placed in front of a newly constructed telescope to identify the charged fragments produced during the reaction process. The telescope is composed of two tetra lateral position sensitive silicon detectors, five silicon PIN diode detectors, one calorimeter made of one cesium iodide crystal and a veto scintillator paddle. All the elements were coded into G4Beamline which is a Geant4 based simulation developed to model accelerator beamlines. The fragments exiting the telescope that deposited energy inside the veto detector were identified and studied using the ROOT analysis framework. We will present and discuss the results from this work.

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