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Geant4 simulator for gamma collimator to obtain the requirements of a measuring device and to track them SELIM ROMERO, OMAR HERNANDEZ, JORGE LOPEZ, The University of Texas at El Paso, JASON HOLMES, Arizona State University — Our main focus is in a gamma source or proton interaction in general, because tracking gamma particles is too difficult, so we would like to "measure" gamma distributions-interaction to study how exactly interacts for certain geometries like a collimator to know how gammas interact with a collimator of lead, also trying to "track" gamma rays to give a branch or resolution to fix for at least this geometry and its set of variables, giving us the ability to make a device that could track or measure gammas as expected. After creating the gamma source, we'll measure and track gammas in the simulation, and based on that, we'll expect to force the track in a real detector/device, it is of most interest to optimize some parameters of the collimator like length, thickness and spacing, also study those variations versus the location-distance of the gamma source to find out a decent focal length.

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