

Abstract Submitted
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Muons Produced in a Beam Dump by 8 GeV and 120 GeV Incident Protons¹ ROBERT ABRAMS, Muons, Inc., CARY YOSHIKAWA, Fermilab — When a high energy proton beam is stopped in a beam dump, muons typically emerge with momenta in the range of hundreds of MeV/c. The production rates, momentum spectra, spatial and angular distributions of muons emerging from various beam dump configurations have been studied using G4Beamline, a Geant4-based simulation program. In addition, calculated rates of surviving pions, protons, and neutrons will be presented. These results are intended to be useful for planning experiments that require a source of low energy muons, such as the MANX muon cooling experiment. The proton energies, 8 GeV and 120 GeV, correspond to those available at the Fermilab Booster and Main Injector, respectively.

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