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G4Beamline Particle Tracking for Muon Beam Lines[1] KEVIN BEARD, ROLLAND JOHNSON, THOMAS ROBERTS, Muons, Inc. — The development of bright muon beams, which are needed for muon colliders and neutrino factories and are usually required to pass through matter, is limited by the lack of user-friendly numerical simulation codes that accurately calculate scattering and energy loss in matter. Geant4 is an internationally supported tracking toolkit that was developed to simulate particle interactions in large detectors for high energy physics experiments, and includes most of what is known about the interactions of particles and matter. Geant4 has been partially adapted in a program called G4beamline (G4BL) to develop muon beam line designs. We are continuing the development of G4BL to enhance its graphical user-interface and add other features to the program to facilitate its use by a larger set of beam line and accelerator developers. We describe the set of around thirty users currently using the program.

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