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## **Muon Backgrounds from Beam Interactions with the Accelerator Structure at C3**

*Thursday, 18 May 2023 13:45 (15 minutes)*

Machine-induced muon backgrounds at linear colliders are an important consideration when ensuring a high quality physics dataset, as this background can generate spurious missing-energy signals and degrade the ultimate physics reach in recoil-based measurements and searches. This rare background requires detailed beam-material interaction and transport simulations through many meters of accelerator complex to estimate its rate at the detector. In particular, it is often the subject of dedicated, one-off, simulation studies given the impact of accelerator structure details on the background spectra and total rates and recovery and reproduction of simulation codes can be difficult. We will discuss the status of producing this simulation and any corresponding results.

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