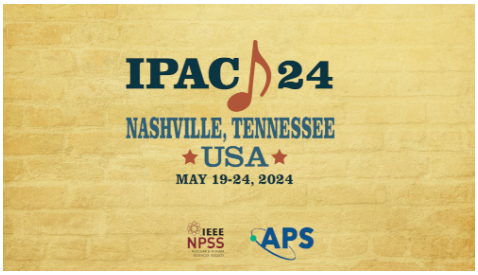

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A review of the Beam Delivery Simulation (BDSIM) user community

Wednesday, 22 May 2024 16:00 (2 hours)

Beam Delivery Simulation (BDSIM) is a Monte Carlo particle tracking simulation tool for modelling energy deposition in 3D models of particle accelerators. Initially conceived in 2001 to model the collimation system in the International Linear Collider (ILC), in recent years BDSIM has undergone a significant transformation across virtually its entire code base. As a result of its newer features, functionality, and performance, BDSIM is becoming increasingly adopted throughout the particle accelerator community for a wide variety of applications. Here, we review recent BDSIM studies by members of the BDSIM user community, including but not limited to linear and circular High Energy Physics (HEP) colliders, HEP fixed target experiments, diagnostics and collimation at light sources, and medical accelerators including start-to-end proton therapy machines and radiobiology research beam line design projects.

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