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Simulations for energy frontier (15' + 5')

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Monte Carlo (MC) event samples with simulation of detector response are an essential part of the strategic planning for future energy-frontier experiments, such as High-Luminosity LHC, ILC (International Linear Collider), FCC (Future Circular Collider), CEPC (Circular Electron Positron Collider), SPPC (Super Proton-Proton Collider) and other future particle collider proposals. This talk describes a project, called HepSim, that focuses on Monte Carlo samples created using large-scale computing facilities such as High-performance computing (HPC) and the Open Science grid (OSG). HepSim provides software tools and publicly accessible Monte Carlo event samples including fast and full detector simulations, to be used for physics and performance studies by the HEP community. A few examples relevant to specific physics cases will be illustrated.

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