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Indirect Searches for Heavy Z' Bosons at ILC, CLIC, and MuC

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This talk will present a common framework for indirect searches for heavy neutral gauge bosons at the International Linear Collider (ILC), the Compact Linear Collider (CLIC), and a muon collider (MuC), considering their different energy stages. The analysis will focus on virtual Z' exchange in fermion-pair production at energies below the resonance, using a linear parametrization of deviations from Standard Model angular distributions in terms of helicity-amplitude parameters. The talk will demonstrate how model trajectories in helicity-parameter space can be used to investigate the structure of the new interaction. Expected lower limits on the Z' mass will be compared for selected benchmark models using a binned χ^2 analysis of Standard Model Asimov data.

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