

How Does Leptonic Collider Indirectly Probe Neutralino Dark Matter?

We have calculated the one-loop effective action in the Standard Model dimension-6 operator basis by integrating out neutralinos and charginos in Minimal Supersymmetric Standard Model (MSSM) by using the Covariant Derivative Expansion (CDE) method. The results were verified by comparing the $h\gamma\gamma$ effective coupling from these effective operators and from loop calculation or low energy theorem. As a demonstration of the applications of these operators, we studied the effects of them on the future lepton colliders, to see how the high precisions of future electroweak and Higgs measurements can constrain the electroweak-ino sector of the MSSM.

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Session Classification: Poster Session