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## The Bloch Nordsieck (BN) restoration for $l\bar{l} \rightarrow t\bar{t}$

In nowadays theoretical approach to describe the physics behind scattering experiment we use elementary particles as degrees of freedom. These stand in remarkably agreement with experimental data but encounter an existential dilemma from the quantum field theoretical point of view, since these states are gauge dependent. The solution to this problem for a non-perturbative theory is provided by the Fröhlich-Morchio-Strocchi (FMS) mechanism, where physical states in the electroweak case are composite objects, which reduce to the elementary particles in the limes of low energies. Including this overlooked side of the electroweak sector of the Standard model, we want to show the non-violation of the Bloch-Nordsieck (BN) theorem for the s-channel annihilation  $l\bar{l} \rightarrow t\bar{t}$ . This process is of particular interest for future NLC experiments, where the electroweak corrections at high energies would be significant according to standard perturbative calculations.

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### Collaboration / Activity

Theory

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