

New Mechanism for Mass Generation of Gauge Field

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Abstract: A new mechanism for mass generation of gauge field is discussed in this paper. By introducing two sets of gauge fields and making the variations of these two sets of gauge fields compensated each other under local gauge transformations, the mass term of gauge fields is introduced into the Lagrangian without violating the local gauge symmetry of the Lagrangian. This model is a renormalizable quantum model.

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Key words: mass of gauge field, gauge symmetry, gauge field

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