

## New Electroweak Model Without a Higgs Particle

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**Abstract:** A new unified electroweak model is proposed in this paper. In this unified electroweak model, Higgs mechanism is not used, so no Higgs particle exists in the model. In order to keep the masses of intermediate gauge bosons non-zero, two sets of gauge fields will be introduced. In order to introduce symmetry breaking and to help to introduce the masses of all fields, a vacuum potential is needed. Except for those terms concerning Higgs particle, the fundamental dynamical properties of this model are similar to those of the standard model. And in a proper limit, this model will approximately return to the standard model. The purpose of this paper is not to say that the Higgs particle does not exist in Nature, it is only to prove that, without a Higgs particle, we can also set up a unified electroweak model which is consistent with present experiments.

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Key words: electroweak interactions, gauge symmetry, Higgs particle, symmetry breaking

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