

## Signal of New Physics from the Study of Rare $\Lambda_b \rightarrow \Lambda e^+ e^-$ decay in $Z'$ -Model

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**Abstract :** In this paper, the effect of  $Z'$ -mediated flavor-changing neutral current on  $\Lambda_b \rightarrow \Lambda e^+ e^-$  rare decay has been studied. We find the branching ratio is reasonably enhanced from its standard model value and gives the possibility of new physics beyond the standard model. The contribution of  $Z'$ -boson depends upon the precise value of  $M_{Z'}$ .

**Keywords:** Z-boson;  $Z'$ -boson; Semileptonic baryonic decays; Heavy quark effective theory

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