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Sphaleron in the Higgs Triplet Model

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We study the vacuum structure of the gauge and Higgs fields and calculate the saddle-point sphaleron configuration in the Higgs Triplet Model (HTM). The coupled nonlinear equations of motion of the sphaleron are solved using the spectral method. We find the inclusion of the triplet scalar could in principle significantly change the sphaleron energy compared with the Standard Model (SM).

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