

Study of Topological Structure of Vacuum by Lattice QCD

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Abstract: Overlap fermions and improved 5Li cooling are compared, which exhibits that these two filter methods can produce similar structures. Then the overlap fermions and improved 5Li cooling are combined to calculate the topological charge and identify the structure of the vacuum. The results are consistent with instanton liquid model.

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Key words: overlap fermions, improved 5Li cooling, topological charge, structure of the vacuum, instanton liquid model

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