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Topology via Spectral Projectors with Staggered Fermions

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Spectral projectors on the eigenmodes of the Dirac operator can be used to derive a fermionic lattice definition of the topological charge. Studying the renormalization properties of the lattice charge, we extend the spectral projectors definition of the topological susceptibility to the case of staggered fermions. Besides, we also generalize the spectral method to any higher-order cumulant of the topological charge. Finally, we present results obtained in the quenched case for the topological susceptibility and for the fourth cumulant, as well as some preliminary results in full QCD.

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