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Title:	$Z_2$ symmetry in $Z_2$ +Higgs theory. In:
Other Titles:	Vinod, (eds). The 38th International Symposium on Lattice Field Theory (LATTICE2021) - Oral presentation.
Authors:	Biswal, Minati (/jspui/browse?type=author&value=Biswal%2C+Minati)
Keywords:	$Z_2$ symmetry +Higgs theory
Issue Date:	2022
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Citation:	Proceedings of Science, 396, 505.
Abstract:	Using Monte Carlo methods, we study $Z_2$ symmetry in $Z_2$ +Higgs theory. In 3 + 1 space-time dimensions, our simulation results suggest that the $Z_2$ symmetry is realized at large number of temporal lattice points ( $N_t$ ) in the Higgs symmetric phase. In order to see the dependence of $Z_2$ symmetry on the number of temporal lattice points we have also studied a simple temporal one dimensional model for a given spatial site. We show that the $Z_2$ symmetry is observed at the level of free energy at large $N_t$ limit. For this model, we also compute the density of states (DoS) for various $N_t$ values, where we show that the realization of the $Z_2$ symmetry happens at higher $N_t$ . Therefore, the realization of $Z_2$ symmetry may be due to dominance of the DoS.
Description:	Only IISER Mohali authors are available in the record.
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