



Department of
Theoretical Physics

THE QUANTUM SPACETIME SEMINAR SERIES

Eigenstate thermalization in the Sachdev-Ye-Kitaev model

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The eigenstate thermalization hypothesis (ETH) provides an explanation as to how closed unitary quantum systems can exhibit thermal behavior in pure states. In this work we examine the Sachdev-Ye-Kitaev model as well its IR limit as described by an effective Schwarzian action. We show that, as expected from evidence found using exact diagonalization, the model satisfies ETH. In the Schwarzian limit, we study a specific class of states created by heavy operators and find that they only show a weak form of ETH.