

In this work, we show, that relative oscillations in asymptotic times of microcanonical Out-of-Time-Order correlators (OTOCs) are suppressed by chaos with the size of the system. Therefore they can serve as an indicator of quantum chaos in quantum systems. We demonstrate this phenomenon on numerical results of the Out-of-Time-Order correlators from a model with hamiltonian based on the  $u(3)$  algebra. Firstly we prove, that this model can be used not only for the description of molecular vibrations, but also Bose-Einstein condensate. Then we employ several methods for the analysis of both quantum and classical chaos, namely spectral statistics such as Nearest Neighbour Spacing Distribution and Brody distribution, Inverse Participation Ratio, Poincaré sections, Lyapunov exponent, and the chaotic fraction of classical phase space. We compare these results with relative oscillations of microcanonical Out-of-Time-Order correlators and show, that their suppression corresponds with the chaoticity of the quantum system and the fraction of chaotic regions of the classical phase space.