Abstract Submitted
for the DAMOP20 Meeting of
The American Physical Society

quantum dynamics in the kicked top model and its generalizations[1] CHENWEI LV, CHANGYUAN LYU, YANGQIAN YAN, QI ZHOU, Purdue University — The kicked top model has been extensively studied for exploring classical and quantum chaos. Typically, the normalized quadratic interaction, where the strength inversely scales with the size of the system, is considered to avoid the divergent energy density. Here, we show that such a constraint can be relaxed by considering an alternative means of realizing the kicked top model and its generalizations. As a result, new quantum chaotic behaviors emerge and enable precision measurements beyond the standard quantum limit.

[1]DOE DE-SC0019202, W. M. Keck Foundation, and the Center for Science of Information (CSoI), an NSF Science and Technology Center, under grant agreement CCF-0939370

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Date submitted: 31 Jan 2020 Electronic form version 1.4