Spacing Ratio Distribution

Aditya Chincholi

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- Or is it $t \to -t$, $\theta \to -\theta$, $p \to p$?

The issue is the second definition is the one used by Lemarie et al in the "Universality of the Anderson Transition" paper.

The Problem

$$H = \frac{p^2}{2} + Kcos(\theta)\sum_n \delta(t - n\tau)$$

This hamiltonian is symmetric wrt $t \to -t$, $\theta \to -\theta$ i.e time reversal and wrt $\theta \to -\theta$, $p \to -p$ i.e. parity. The time reversal only holds if we consider only $\Delta t = N\tau$ but that is fine I guess.

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- Since the Hamiltonian has parity symmetry, I think that is what is causing the problem. The eigenvectors have a parity quantum number which needs to be separated.
- But even then, the distribution should be e^{-s} for the spacing. which is not the case.
- The Izrailev and Atas papers I was talking about last time were indeed on kicked rotors on a torus as you suspected.

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- Maybe I'm missing something but apparently, eigenvector solving doesn't allow me to specify accuracy/tolerance anywhere.
- All in all, I have no clue what is going wrong.