Repeated projective measurements during the evolution of a closed quantum system create a sequence of probabilities for the first detection of a certain quantum state in time, reflecting the probabilistic nature of the quantum evolution. The associated discrete non-unitary evolution is determined by back-folded eigenvalues, which create singularities due to spectral degeneracies. We discuss that for these degeneracies, the average first detected transition time between different states as well as its variance diverge. This indicates that the quantum systems are very sensitive to the details of the repeated measurement process.

References