**Figure S1:**

Comparison of the different analytical results. Shown are the click times calculated using the exact solution Eq. (9), the WKB approximation Eq. (22), and the simplified WKB expression for large , Eq. (23). The WKB results are in excellent agreement with the exact solution for the rare clicking regime when the equilibrium point of the deterministic equation, , is sufficiently far away from . For large , the WKB approximation begins to deviate from the exact solution.