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Semi empirical equation of the Deuterium-Deuterium and Deuterium-Tritium reactivity as a function of temperature is used to obtain a toy model of experimental data taken from a dynamical system. Under some conditions temperature can be assumed to be an unknown monotonic function of time. We are attempting to recreate the equation from the toy experimental trajectories, now as a function of time. We are also studying how modifying parameters changes trajectories of the system. (Received February 24, 2017)