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## Oscillatory Reconnection of a 2D magnetic X-point in hot coronal plasma

Oscillatory Reconnection is a fundamental relaxation mechanism, characterised by changes in magnetic connectivity, the oscillatory nature of which requires no external periodic driving force to be sustained. This process has been one of the proposed mechanisms behind phenomena, such as quasi-periodic pulsations (QPPs). Its manifestation through the interaction of the ubiquitous waves with null points in the solar atmosphere opens the possibility of utilizing oscillatory reconnection as a tool for coronal seismology. We will be presenting the results from a series of parameter studies of a 2D X-point in coronal conditions, which we have performed with the PLUTO code. We report on the independence of the oscillation period from the type and strength of the wave pulse, initially perturbing the null. We will also discuss the effects that the equilibrium magnetic field profile, density and temperature distribution, and anisotropic thermal conduction have on the resulting periodicity and decay rate of oscillatory reconnection. This will offer a better understanding this energy release process and allows us to formulate an empirical formula connecting the previous quantities, opening the way in using oscillatory reconnection for coronal seismology.

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