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Computational Modeling of Off-resonant RF Heating of Ultracold Plasmas to Obtain Electron-ion Collision Rates[1] PUCHANG JIANG, JOHN GUTHRIE, JACOB ROBERTS, Colorado State University — Off-resonant RF excitation of electron oscillations can be used in ultracold plasmas to measure electron-ion collision rates. This measurement is accomplished by determining the amount of heating imparted by such RF excitations. In this poster, we present computational modeling of the electron-ion collision rate and the associated RF heating as a function of parameters such as electron temperature/strong coupling, electron magnetization, and RF field parameters.

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