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Comparing multiple theory treatments applied to off-resonant radiofrequency heating of ultracold neutral plasmas with varying electron magnetization[1] PUCHANG JIANG, JOHN GUTHRIE, JACOB ROBERTS, Colorado State University — We have recently conducted experiments measuring ultracold neutral plasma electron off-resonant radiofrequency heating rates. These measurements were performed at low (weak) and high (extreme) degrees of magnetization. Multiple theoretical treatments can be adapted to be applied to these measurements, including binary collision, stopping power, and AC conductivity theories. We discuss the applicability of these theories and compare their predictions to experimental results.

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