

DAMPING TIMES OF PROMINENCE OSCILLATIONS

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The damping of standing slow waves in cool ($T < 10^4$ K) plasma loops is investigated in both the linear and nonlinear regimes. The dissipative effects of thermal conduction, viscosity, radiative cooling, and heating are considered. We explore the whole range of parameter space, including temperature, pressure, length, and wave mode number. We find that for prominence oscillations, damping due to optically thin radiation is the most important effect. We also find that the damping times and periods lie within the corresponding observational values.