

SPATIAL MAGNETO-SEISMOLOGY OF THE SOLAR CORONA

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The extreme-ultraviolet (EUV) imagers onboard the planned Solar Dynamics Observatory (SDO) and Solar Orbiter (SO) will offer the best chance yet using observations of post-flare loop oscillations to probe the fine structure of the corona. Recently developed MHD wave theory has shown that the properties of loop oscillations depend on their fine structure, e.g., magnetic and density stratification. Up to this point, many studies of coronal loop oscillations have concentrated solely in the frequency domain. With the advent of fast time cadence, high resolution 2D EUV images, the spatial properties of loop oscillations can be explored in more detail. We illustrate how the amplitude profile of loop oscillations depends on their fine structure and how this can be used to determine the fundamental plasma parameters of the corona.