

MHD wave propagation in the solar network

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Abstract

Magneto-acoustic and Alfvénic waves are ubiquitous in solar coronal loops, possibly being excited by photospheric motions. It is not clear, though, how these waves get so high, having obstacles such as the acoustic cut-off frequency, reflection and refraction of fast MHD waves and also the strongly reflecting transition region. In this contribution we report on 2D numerical modelling of waves in magnetic arcade structures extending from photospheric layers through the transition region to the corona. Waves in the arcade are excited by sub-photospheric p-modes. We discuss the behaviour of waves, their conversion and propagation properties and possible mechanisms allowing their escape through the transition region.