

Braided magnetic loops in the solar corona: relaxation and heating.

Parker's notion of topological dissipation views current sheet formation as an inevitable consequence of field line braiding via photospheric footpoint motions. We discuss a model that develops this idea. We argue that braiding leads to the development of non-singular current layers, with the threshold for the development of instabilities being very low when motions with high topological entropy are taken into account. We consider the viability of braiding as a mechanism for coronal heating, reviewing observational evidence for braiding and showing how the resultant heating depends on the nature of the photospheric driver as well as the coronal resistivity.