

Complex Dynamic Flows in Solar Flare Sheet Structures

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Observations of high-energy emission from solar flares often reveal the presence of large sheet-like structures, sometimes extending over a space comparable to the Sun's radius. Given that these structures are found between a departing coronal mass ejection and the post-eruption flare arcade, it is natural to associate the structure with a current sheet; though the relationship is unclear. Moreover, recent high-resolution observations have begun to reveal that the motions in this region are highly complex, including reconnection outflows, oscillations, and apparent wakes and eddies. We present a detailed first look at the complicated dynamics within this supra-arcade plasma, and consider implications for the interrelationship between the plasma and its embedded magnetic field.

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