

**The Internal Structure of ICME Ion Properties, Its Magnetic Structure and Associated Solar Eruption Sources**

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A common feature in most solar flare-CME models is the formation of a post-CME current sheet (CS) between the outgoing CME and the post-flare loops at the eruption site. Continuous reconnection inside the post-CME CS presumably heats and accelerates particles that stream upwards to be trapped within the structured magnetic fields of the CME and carried into the heliosphere. Since the ionization states of heavy ions become frozen-in within a few solar radii, the ion properties inside the interplanetary coronal mass ejections (ICMEs) should bear direct signatures of magnetic reconnection in the coronal environment. In this presentation, we investigate the relationship of the internal structure and variations of ion properties inside ICMEs with its magnetic field structure and the associated solar eruption sources.