

# RECONNECTION ONSET IN THE BREAKOUT MODEL FOR CME INITIATION

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Fast coronal mass ejections (CMEs) are the most massive explosions in the heliosphere, and the primary drivers of geoeffective space weather. Although it is generally agreed that magnetic reconnection is the key to fast CME initiation, different models incorporate reconnection in different ways. One promising model --- the breakout scenario --- involves reconnection in two distinct yet interconnected locations: breakout reconnection ahead of the CME, and flare reconnection behind it. We will discuss what we have learned about the early evolution of breakout and flare reconnection from recent high-resolution 2.5D adaptively refined MHD simulations of CME initiation, including the evolving properties of the breakout and flare current sheets, the conditions that trigger reconnection onset in each sheet, the ensuing positive feedback between breakout and flare reconnections, and implications for electron acceleration in flares.