Observational Signatures of Magnetic Reconnection in the Extended Corona

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Observational signatures of reconnection have been studied extensively in the lower corona for decades, successfully providing insight into energy release mechanisms in the region above post-flare arcade loops and below 1.5 solar radii. During large eruptive events, however, energy release continues to occur well beyond the presence of reconnection signatures at these low heights. Supra-arcade downflows (SADs) and downflowing loops (SADLs) are particularly useful measures of continual reconnection in the corona as they may indicate the presence and path of retracting post-reconnection loops. SADs and SADLs have been faintly observed up to 18 hours beyond the passage of corona mass ejections through the SOHO/LASCO field of view, but a recent event from 2014 October 14 associated with giant arches provides very clear observations of these downflows for days after the initial eruption. We report on this unique event and compare these findings with observational signatures of magnetic reconnection in the extended corona for more typical eruptions.