

MODELLING UV EMISSION AND ION CHARGE STATES IN THE POST-CME CURRENT SHEET

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Post-CME current sheet is a common feature associated with solar eruptions as inferred by CME models. Thin ray-like features in the corona that appear shortly after the eruption in between the ejecta and post-CME loops have been observed by white light coronagraphs on SMM, SOHO/LASCO and MLSO/MK4. They are believed to be the observational evidence of the post-CME current sheet. Magnetic reconnection within the current sheet should produce observational signatures, such as heated plasma and outflows, that can be used to test various models. Observations from SOHO/UVCS and Hinode/XRT support its existence by the high temperature emission that is co-spatial with the ray-like features observed in white light. We present the first attempt to model the UV line emission and the ionic charge state evolution in a post-CME current sheet, and discuss the observational consequences implied from our results.

UV Emission, solar Eruption

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