



CME Plasma Dynamics Using In-situ and Remote-sensing Observations

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The thermal and kinetic energy of Coronal Mass Ejections [CMEs] can be best reconstructed if the plasma density, temperature and dynamics of each of their components are known. During periods of quadrature, we use a combination of in-situ measurements from ACE/SWICS and remote sensing observations from SDO/AIA and STEREO/EUVI to present several case studies of geo-effective halo-CMEs. We carry out density diagnostics and Differential Emission Measure [DEM] profile calculations to reconstruct a 3D picture of the CME plasma for the selected cases in the low solar corona. We then discuss these results in the context of models of CME initiation and release.