

M26a **Thermal Evolution of Reconnection Outflows in Solar Eruptions**

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The atmosphere of the Sun is a natural laboratory for astrophysical reconnection. We study reconnection outflows from solar eruptions using (1) an MHD simulation including field-aligned thermal conduction, and (2) application of a validated differential emission measure (DEM) inversion method on narrow-band EUV images from the Atmospheric Imaging Assembly (AIA) onboard the Solar Dynamics Observatory (SDO).

The comparative study allows us to (a) examine the role of mass transport and compression by retracting field lines, (b) elucidate the role of the fast mode shock for the energy and mass budget of flare loops, and (c) follow the thermal history of plasma from chromospheric evaporation to condensation.