Understanding SDO/AIA Observations of the 2010 June 13 EUV Wave Event: 
Direct Insight From a Global Thermodynamic MHD Simulation

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• Conduct realistic 3D thermodynamic MHD simulation of the 2010 June 13 EUV wave. (Lower Corona Model of the SWMF)
• Synthesize SDO/AIA images for direct comparison to time-dependent observations
• Reproduce both the 2-part structure that is observed and the characteristic thermodynamic signature with a relatively simple eruption model
• Phase analysis of the 3D MHD data indicates large-scale EUV perturbation consistent with a fast-mode wave!