Abstract Submitted
for the DPP19 Meeting of
The American Physical Society

Simulating Flux Ropes as Systems of Current Carrying Wires MAGNUS HAW, PAUL BELLAN, California Institute of Technology — A new model is developed to model flux ropes as plasma systems of thin current paths in a 3D space. This model is shown to be useful for reproducing experimental flux rope evolution, testing new experimental configurations, evaluating and interpreting the magnetic fields of complex 3D current paths, and testing the robustness of analytic flux rope models. The model is computationally inexpensive and can run parameter scans of flux rope experiments on a personal laptop computer.

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Date submitted: 09 Oct 2019 Electronic form version 1.4