

Modeling the dynamics of plasma in the solar corona.

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ABSTRACT

The dynamics of complex plasma arcades in the solar corona frequently results in ejection of billions of tons of magnetized plasma into interplanetary space. Due to both observational limitations and the intrinsic complexity of these configurations, their three-dimensional structure and eruption mechanism are subjects of debate. I present a mathematical model describing the evolution of the plasma structures and consider the extent to which it resolves outstanding issues. Some of the methods used have wider applicability.