



Nonaxisymmetric, multi-region relaxed magnetohydrodynamic equilibrium solutions

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We describe a magnetohydrodynamic (MHD) constrained energy functional for equilibrium calculations that combines the topological constraints of ideal MHD with elements of Taylor relaxation.

Extremizing states allow for partially chaotic magnetic fields and non-trivial pressure profiles supported by a discrete set of ideal interfaces with irrational rotational transforms.

Numerical solutions are computed using the Stepped Pressure Equilibrium Code, SPEC, and benchmarks and convergence calculations are presented.

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