## Abstract Submitted for the DPP06 Meeting of The American Physical Society

A Simplified Theory of Plasma Jets<sup>1</sup> CHIPING CHEN, MIT Plasma Science and Fusion Center — A simplified model describing a plasma jet is presented. In this model, the plasma jet is assumed to obey the ideal MHD equation in the Woltjer-Taylor equilibrium state locally. The ratio of the self magnetic energy to the self-magnetic helicity is assumed to be slowly varying. Under these assumptions, a complete set of equations governing the plasma jet is derived. Techniques for solving these equations are discussed.

<sup>1</sup>Research support by DOE OFES.

Chiping Chen MIT Plasmas Science and Fusion Center

Date submitted: 21 Jul 2006 Electronic form version 1.4