

Abstract Submitted
for the DPP08 Meeting of
The American Physical Society

Some Consequences of Asymmetries in Rotating Magnetized Plasma¹ NATHANIEL FISCH, Princeton University Plasma Physics Laboratory — Rotating plasma traps are useful in many applications, including magnetized mirror fusion, separation devices, radiation sources, and thrusters. The plasma in these traps, which can include either or both charge species, rotates through $E \times B$ drifts. The drifts occur in the presence of electric potential, which can arise naturally when the trap is unequal in its confinement properties with respect to charge species or it can be imposed through separate means. A number of asymmetries can be introduced into these kinds of devices, such as through the injection of rf waves or through the arranging of the static fields, which affect confinement, thrust, or separation properties.

¹This work supported by DOE Contract # DE-AC02-76CH03073.

Nathaniel Fisch
Princeton University Plasma Physics Laboratory

Date submitted: 17 Jul 2008

Electronic form version 1.4