

Abstract Submitted
for the DPP10 Meeting of
The American Physical Society

Active Feedback Stabilization of Magnetic Mirror Trap – Theoretical Investigation ASAF LIFSHITZ, ILAN BE'ERY, AMNON FISHER, AMIRAM RON, The Technion - Israel Institute of Technology — An experimental system is being built in an attempt to stabilize flute instabilities in a mirror machine using active feedback. Using the drift-ordered fluid equations derived in [1], the system is investigated theoretically and numerically. Experimental results are compared with code prediction. Also, different possible methods of feedback stabilization are investigated. These methods include use of electrostatic and magnetic actuators.

[1] A. D. Beklemishev *et al.*, “Vortex confinement of plasmas in symmetric mirror traps”, Fusion Science and Technology, Vol. 57, May 2010.

Asaf Lifshitz
The Technion - Israel Institute of Technology

Date submitted: 22 Jul 2010

Electronic form version 1.4