

Abstract Submitted  
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**Characterizing the Operation of a Rotating Wall on a Non-Neutral Ion Plasma** DANIEL ERICKSON, Brigham Young University, BRYAN PETERSON, Brigham Young University, BYU PLASMA PHYSICS GROUP TEAM — We are working on characterizing the operation of a rotating wall apparatus for lengthening the confinement time in our Penning-Malmberg style ion trap. The rotating wall works by applying a sinusoidal voltage signal to each segment of a ring surrounding the plasma. Each segment is phased differently so the effect is that of a dipole field that rotates in time. At the right frequency this causes a torque on the plasma and compresses it, balancing the Coulomb repulsion that drives it apart. We are currently in the troubleshooting phase of our testing, and a discussion of our proposed and attempted solutions will be presented.

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