Abstract

It has been suggested that magnetically trapped particles play a role in the asymmetry-induced transport observed in our experiment. This magnetic trapping would occur due to the small increase ($\beta \equiv \delta B/B \approx 0.4\%$) in magnetic field at the center of our solenoid and would keep low velocity particles confined to the ends of the trap. To test this suggestion, we have added three coils of additional windings to our solenoid that allow us to adjust the axial field variation δB, and have examined the effect of these adjustments on the radial flux resonances we typically observe. Making B as uniform as possible reduces β by a factor of five, but this produces little change in the transport. Varying β over the broader range -8.5% to 9.5% gives variations of 20-50% in the magnitude, peak frequency, and width of the flux resonances. The flux magnitude decreases with increasing β while the resonance width increases. The resonance peak frequency increases with $|\beta|$. We have not yet found a model that can explain these results.