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Plasma Flow Damping and Confinement Times on MCX R. CLARY, R. ELLIS, A. HASSAM, S.H. CHOI, R. ELTON, C. TEODORESCU, I. UZUN-KAYMAK, W. YOUNG, University of Maryland — Abstract The Maryland Centrifugal eXperiment uses a sixteen-chord H_α measurement system to measure absolute intensity levels of the Hydrogen Balmer- alpha line in a rotating plasma with mirror magnetic geometry. This newly enhanced multi-chord system has allowed us to characterize neutral Hydrogen behavior at the mid-plane and determine its affect on plasma flow and confinement times. We compare these results with theoretical models in the context of fluid equilibrium, perpendicular resistivity, and critical ionization velocity.

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