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Cross-Field Transport of Multiple-Species Ion Plasma in a Rotating Cylinder¹ TAL RUBIN, ELIJAH KOLMES, IAN OCHS, MIKHAIL MLODIK, NATHANIEL FISCH, Princeton University — Rotating plasma systems present novel possibilities for control of plasma parameters by varying the angular frequency of the vessel, thereby creating shear and driving cross-field transport. Furthermore, the existence of multiple ion species introduces additional cross-field transport effects which enrich the solution space and give rise to unique phenomena. We investigate experimentally-accessible profiles in a collisional magnetized plasma and discuss their merits for common applications of such systems.

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