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Equilibrium Profiles in the Helimak KENNETH GENTLE, JAKUB FELKL, KEVIN LEE, DYLAN MIRACLE, University of Texas at Austin — The Helimak is a good approximation to the infinite cylindrical slab, and the end plates allow application of radial electric fields that drive radial currents. The plasma is produced by ECH, but the profiles are much broader than the ECH resonance. The high level of turbulent density fluctuations allows an upper hybrid resonance for a range of magnetic fields below the ECH resonance (larger radii). The density fluctuations can be greatly reduced by application of radial bias. The self-consistent equilibria over the range of operating conditions will be described. Work supported by the Department of Energy Office of Fusion Energy Sciences DE-FG03-00ER54609.

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