

Abstract Submitted  
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**Irvine FRC Equilibria Measurements** E. TRASK, W.S. HARRIS, W.W. HEIDBRINK, E.P. GARATE, A. VAN DRIE, J.M. LITTLE, University of California, Irvine — We plan on launching lower hybrid waves into our axially-symmetric **F**ield **R**eversed **C**onfiguration. Lower hybrid wave propagation depends strongly on both the magnetic and density profiles. We therefore must have good maps of our magnetic field and densities as a function of radius and axial position. The field and density mapping is done using two 3-D magnetic probe arrays, two axial magnetic probe arrays, a 140 GHz interferometer, and a triple probe. Each 3-D array consists of 30 flux loops at 10 different radial positions. We have made magnetic field measurements at different axial positions, giving us all three field components as a function of radius and axial distance. Our two fixed axial arrays measure the axial field at two different radial positions. They provide a reference for comparisons between different shots when the radial array moves. Reversed fields of  $\sim 100$  Gauss have been observed. The 140 GHz interferometer and triple probe combination has given us line densities of high  $10^{14}\text{cm}^{-2}$  with peak densities of  $2 \times 10^{13}\text{cm}^{-3}$ .

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