

Abstract Submitted  
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**Construction of the PFRC-2 Device**<sup>1</sup> S.A. COHEN, Princeton Plasma Physics Lab, B. BERLINGER, A. BROOKS, C. BRUNKHORST, PPPL, M. EDWARDS, MAE Dept, Princeton University, J. GUMBAS, C. MYERS, PPPL — Upgrades to the PFRC device are being made, under an ARRA grant, to enable exploration of FRC plasmas heated by odd-parity rotating magnetic fields (RMF) to keV electron and ion temperatures. The new 84-cm-long, 22.7-cm-ID vacuum vessel is made of polycarbonate, with 87 penetrations for diagnostics, feedthroughs, and pumps. Eight internal high-temperature-superconductor flux conservers with BN shields are installed to allow extension of the plasma duration to over 0.1 s. The RMF power capability has been increased from 20 to 200 kW of 0.1 s duration. PFRC-2 operations are scheduled to begin in December 2011.

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