

**Abstract Submitted for the Forty-Eighth Annual Meeting  
Division of Plasma Physics  
October 30<sup>th</sup>-November 3, 2006, Philadelphia, Pennsylvania**

Category Number and Subject: 5.6.2. DIII-D Tokamak

Theory     Experiment

**Installation and Testing of a 110 GHz Gyrotron With Depressed Collector Potential on the DIII-D Tokamak,\*** John Lohr, I.A. Gorelov, H.J. Grunloh, K. Kajiwara, C. Pawley, D. Ponce, J.F. Tooker, *General Atomics*, T.S. Chu, M. Blank, P. Borchard, P. Cahalan, S. Cauffman, and K. Felch, *Communications and Power Industries* – A single stage depressed collector gyrotron has been installed for testing on the DIII-D tokamak. The tube has operated at the 1.25 MW level at 44% efficiency for short pulses and at 0.5 MW for 10 s pulses at CPI and now is being tested to full parameters at DIII-D. A two-stage mode conversion dummy load has been built to handle the higher ultimate power from this gyrotron for pulses up to 5 s in length. Modifications to the high voltage power supply system were required to provide 30 kV depression and sequencing of the application of the voltages.

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