

Abstract Submitted  
for the DPP07 Meeting of  
The American Physical Society

**Improved Measurements of Injected Electron Cyclotron Power in DIII-D**<sup>1</sup> I.A. GORELOV, J. LOHR, D. PONCE, General Atomics, M. CENGHER, ORISE, P.S. JOHNSON, Butler U. — Direct measurements of the rf power injected into the DIII-D tokamak from the ECH gyrotrons are being made using a high power dummy load at the tokamak. The measurements will permit power monitors, which measure the rf leakage from well-aligned gaps in the vacuum waveguides near the tokamak, to be calibrated for various elliptical polarizations of the rf propagating in the HE<sub>11</sub> waveguide mode. Using these measurements, correlations with calorimetric measurements of the gyrotron cooling circuits, the usual basis for rf power measurements in the system, will be made. Low power rf measurements and theoretical and experimental estimates of the transmission efficiencies of the individual components in the transmission lines will be compared with the direct measurements.

<sup>1</sup>Supported by the US DOE under DE-FC02-04ER54698 and DE-AC05-76OR00033.

I.A. Gorelov  
General Atomics

Date submitted: 23 Jul 2007

Electronic form version 1.4