

**2005 ANNUAL REPORT  
FUSION RESEARCH CENTER  
GEORGIA INSTITUTE OF TECHNOLOGY  
ATLANTA, GA 30332**

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The Georgia Tech Fusion Research Center (FRC) provides a focus on-campus for research in fusion plasma physics and technology, maintains a research library of international fusion reports, and supports the educational mission of Georgia Tech in the areas of plasmas and fusion technology. This report summarizes the research carried out in the FRC during 2005 and serves as an annual report for Dept. of Energy Grants ER54538 and ER54350.

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**Research Reports**

- p2     Improvements in the 2D TEP Neutral Particle Transport Calculation in Edge Plasmas (DoE Grant ER54538)
- p7     Rotation velocities and radial electric field in the plasma edge
- p14    Investigation of the cause of the High-to-Low mode confinement transition following MARFE formation in DIII-D (DoE Grant ER54538)
- p22    Calculation of toroidal rotation profiles in DIII-D using neoclassical viscosity (DoE Grant ER54538)
- p43    Investigation of edge pedestal structure in DIII-D (DoE Grant ER54538)
- p68    A sub-critical, He-cooled, fast reactor for the transmutation of spent nuclear fuel (DOE Grant ER54350)