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**Core Turbulence Correlation Lengths in Enhanced  
Confinement NCS Plasmas on DIII-D<sup>1</sup>**

E.J. DOYLE, T.L. RHODES, W.A. PEEBLES, C.L. RETTIG, EE Dept. and Inst. of Plasma and Fusion Research, University of California, Los Angeles — The properties of core plasma turbulence in enhanced confinement negative central shear (NCS) discharges are of interest for an understanding of both transport in these plasmas and also magnetic and  $E \times B$  shear effects on turbulence. Previous studies on DIII-D have demonstrated a reduction in core turbulence levels in NCS discharges consistent with pictures of  $E \times B$  shear flow regulation of turbulence.<sup>2</sup> More detailed studies of core turbulence properties using a correlation reflectometer are now possible since the addition of a reflectometer system for core profile measurements on DIII-D. Preliminary data indicate that the turbulence correlation length in the plasma core is reduced in NCS plasmas, indicating a smaller step size for turbulent transport processes.

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<sup>2</sup>C.L. Rettig *et al.*, Phys. Plasmas **5**, 1727 (1998).

☐ Prefer Oral Session  
☒ Prefer Poster Session

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Special instructions: DIII-D Poster Session I (transport, turbulence, & stability), immediately following Jakubowski
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