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**Plasma Profile Behavior in DIII-D Discharges with Counter NBI**<sup>1</sup> J.C. DEBOO, C.M. GREENFIELD, K.H. BURRELL, General Atomics, E. SYNAKOWSKI, Princeton Plasma Physics Laboratory, B.W. STALLARD, Lawrence Livermore National Laboratory, E.J. DOYLE, C.L. RETTIG, L. ZENG, University of California, Los Angeles — Internal transport barriers, ITBs, have been observed in electron and ion temperature profiles and in electron density profiles with counter neutral beam injection into 1.6 MA discharges limited on the inside wall of the vacuum vessel. The profiles exhibited peak values a factor of 2 or more above values outside the barrier. A neutral beam power scan was performed to search for a threshold for the formation of an ITB. No clear threshold was found, however, it was found that for the lower power levels applied, 7–9 MW, a barrier region transiently formed near  $\rho \sim 0.4$  and then collapsed to the plasma center. The cause of the collapse is under investigation. At the larger powers, up to 15 MW, the barrier region formed near  $\rho \sim 0.5$  and was usually terminated by the onset of a locked mode during the current ramp phase of the discharge. At the larger powers a transient H-mode phase or dithering occurred which inhibited or destroyed profile peaking and ITB formation. ITB formation resumed following return to an L-mode phase.

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☐ Prefer Oral Session  
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Special instructions: DIII-D Poster Session 1, first poster
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