

Abstract Submitted
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The Effect of Divertor Magnetic Balance on H-mode Performance in DIII-D¹ T.W. PETRIE, C.M. GREENFIELD, R.J. GROEBNER, A.W. HYATT, R.J. LA HAYE, A.W. LEONARD, A.M. MAHDAVI, T.H. OSBORNE, D.M. THOMAS, General Atomics, S.L. ALLEN, M.E. FENSTERMACHER, C.J. LASNIER, G.D. PORTER, N.S. WOLF, Lawrence Livermore National Laboratory, J.G. WATKINS, Sandia National Laboratories, AND THE DIII-D TEAM — We report on recent experiments for which the magnetic balance of Elming H-mode plasmas was systematically varied. We define “magnetic balance” in terms of DRSEP, which is the radial distance between the upper and lower divertor separatrices at the outboard midplane. The direction of the grad-B drift is toward the lower divertor. Near-steady behavior in energy confinement, density, and ELMing is observed over wide ranges in DRSEP, except near magnetic balance (*i.e.*, DRSEP \simeq 0), where changes in ELMing and higher energy confinement time are observed. While the highest density in H-mode ($n_{e,max}$) is constant between DRSEP of -4 cm (*i.e.*, lower SN) and 0, $n_{e,max}$ is 15%–10% lower for DRSEP > 1.5 cm. Heat flux sharing between the divertors is a strong function of DRSEP between -1.0 cm and $+1.0$ cm.

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Prefer Oral Session
 Prefer Poster Session

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Special instructions: DIII-D Contributed Oral Session, immediately following TN Carlstrom

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