Abstract Submitted
for the DPP08 Meeting of
The American Physical Society

Separatrix location in NSTX[1] FREDERICK KELLY, PPPL, RAJESH MAINGI, ORNL, RICKY MAQUEDA, Nova Photonics, JON MENARD, BEN LEBLANC, RON BELL, STEPHEN PAUL, PPPL — The separatrix location and corresponding plasma parameters in NSTX were estimated for H-mode discharge 117125 containing both MARFEs and ELMs and for Type V ELMy H-mode discharge 128337. Since equilibrium reconstructions with LRDFIT did not accurately locate the LFS separatrix, a method based on the strong electron parallel heat conductivity was used to map the LFS magnetic flux surfaces to the HFS since the innermost Thomson scattering measurement of Te(R) is the most accurate. During a MARFE or at MARFE onset in NSTX shot 117125, this method estimated the electron temperature at the LFS separatrix, $T_{e,sep}$, to vary between 31 and 41 eV. At times with no MARFE or ELM, $T_{e,sep}$ ranged between 41 and 93 eV. These $T_{e,sep}$ values compare well with $T_{e,sep}$ values (28-35 eV) in TEXTOR just before MARFE onset.[1] In NSTX shot 128337 late in the Type V ELMy phase, $T_{e,sep}$ was estimated to be $\sim$100 eV. These separatrix locations place the E_r well outside the separatrix. [1] F.A. Kelly, W.M. Stacey, J. Rapp and M. Brix, Phys. Plasmas 8 (2001) 3382.

[1]Work supported by US DOE Contract No. DE-AC02-76CH03073.

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Date submitted: 18 Jul 2008 Electronic form version 1.4