

Abstract Submitted
for the DPP16 Meeting of
The American Physical Society

Progress with MGI and CHI Research on NSTX-U R RAMAN, W-S LAY, T.R JARBOE, B.A NELSON, Univ. of Washington, D MUELLER, S.P GERHARDT, F EBRAHIMI, S.C JARDIN, G TAYLOR, PPPL — NSTX-U experiments on Massive Gas Injection (MGI) will offer new insight to the MGI database by studying gas assimilation efficiencies for MGI gas injection from different poloidal locations. In support of this research, two ITER-type MGI valves have been successfully commissioned on NSTX-U. Results from the planned experiment ‘Comparison of Private Flux Region with Conventional Mid-plane MGI on NSTX-U’, will be reported. In support of planned Coaxial Helicity Injection (CHI) research on NSTX-U, a new high-resolution grid has been generated for TSC simulations of CHI. This improves the resolution of the CHI injector region, and better models the closely-spaced divertor coils on NSTX-U. These new simulations support previous analysis that suggests a solenoid-free plasma current initiation capability of more than 400kA on NSTX-U. This work is supported by U.S. DOE Contracts: DE-AC02-09CH11466, DE-FG02-99ER54519 AM08, and DE-SC0006757.

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Date submitted: 20 Jul 2016

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