

Abstract Submitted
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Recycling Measurements Following Repeated Lithium Pellet Injection¹ H.W. KUGEL, M. BELL, T. GRAY, D. MUELLER, B. LEBLANC, R. KAITA, T. STEVENSON, C.H. SKINNER, A.L. ROQUEMORE, PPPL, C. BUSH, R. MAINGI, ORNL, V. SOUKHANOVSII, LLNL, R. RAMAN, UW — Repeated Li pellet injection into ohmic He discharges was used to deposit 30 mg on the Center Stack Limiter (CSL) immediately after pre-conditioning this surface with a series of He discharges. A CSL, NBI, D fiducial discharge, then exhibited a reduction in the volume-average density by a factor of about 4 and a peaked density profile. The density reverted to the pre-Li level after two further similar discharges. After another 24 mg of Li was deposited, almost the identical density behavior was observed in the CSL NBI fiducial discharges. These results are similar to aspects of the experience with Li deposition in TFTR. Diverted, LSN, He discharges were then used to condition the Lower Divertor target in NSTX and, similarly, Li pellets injected into a sequence of discharges were used to deposit about 25 mg of Li on the Lower Divertor. As this deposition progressed, the neutral Li line emission from the Lower Divertor increased. Finally, a LSN, NBI, D fiducial was applied. The density exhibited a factor of about 5 reduction from a similar reference discharge at the beginning of the experiment and the density profile was again peaked. These results demonstrated edge pumping of diverted plasmas and increased peaking of the density profile.

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