Abstract Submitted
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Effects of Lithium Plasma-Facing Surfaces on Particle Confinement in CDX-U[1] T. GRAY, R. KAITA, R. MAJESKI, H. KUGEL, J. SPALETA, J. TIMBERLAKE, PPPL, V. SOUKHANOVSKII, LLNL, R. MAINGI, ORNL — Recent experiments on the CDX-U spherical torus have successfully achieved a significant reduction in recycling with large-area liquid lithium plasma-facing surfaces. The effects of a liquid lithium toroidal limiter and evaporative lithium coatings on overall density and τ_p^* will be presented. Such conditions have also demonstrated the need to improve plasma fueling. To address this challenge, a supersonic gas injector, based on a Mach 8 Laval nozzle design,[1] has been installed on CDX-U. The fueling efficiency of the nozzle compared to standard gas puffing will be compared. [1] M. Baumgartner, Ph. D. thesis, Princeton University (1997)

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