

Abstract Submitted  
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**Lithium wall conditioning in RFX-mod** STEFANO MUNARETTO, SAMUELE DAL BELLO, PAOLO INNOCENTE, MATTEO AGOSTINI, ALBERTO ALFIER, FULVIO AURIEMMA, ALESSANDRA CANTON, LORELLA CARRARO, GIANLUCA DE MASI, FEDERICO ROSSETTO, PAOLO SCARIN, DAVID TERRANOVA, Consorzio RFX, Associazione Euratom-ENEA sulla Fusione, C.so Stati Uniti 4, I-35126 Padova, Italy — The first wall of RFX-mod Reversed Field Pinch experiment is entirely covered by graphite tiles. This prevents plasma density control during pulses, because the graphite acts as a Hydrogen reserve providing an influx that depends mainly on the power loads on the wall. Different techniques of wall conditioning were used (He GDC, backing, etc.), but they were not able to provide both a good density control and better plasma performances. For this reason we tested the effect of wall conditioning with Lithium. After Lithium conditioning the wall adsorbs a larger fraction of Hydrogen with respect to the standard clean graphite, allowing a better control of plasma density and the achieving of the highest RFX-mod plasma current (over 1.9 MA). The main effects on plasma behavior are a higher density peaking factor, mostly due to a lower density at the edge in presence of a higher temperature. Particle confinement time increases while energy confinement time does not show significant improvement.

Stefano Munaretto  
Consorzio RFX, Associazione Euratom-ENEA sulla Fusione,  
C.so Stati Uniti 4, I-35126 Padova, Italy

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