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Effects of Lithiumization of Electron Temperature and Density

Profiles B.P. LEBLANC, Princeton Plasma Physics Laboratory, NSTX TEAM — NSTX conducted an aggressive first wall conditioning campaign during which up to 100 g of lithium was evaporated progressively inside the vacuum vessel. This work will search for change in the behavior of n_e and T_e profiles measured by Thomson scattering. Casual observation during the earlier phase of the lithiumization did not reveal significant changes, but a systematic search will be done for the preparation of this paper. Contrary to last year's results, the effects of this more aggressive lithiumization appear to last longer; increase in stored energy and reduction of ELM activity have been observed, sometimes accompanied by core impurity accumulation. Further analysis will attempt to correct the part of the Thomson scattering data which was affected by window coating during the last month of plasma operation. This work is supported by United States DOE contract DE-AC02-76CH03073.

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