Abstract Submitted
for the DPP14 Meeting of
The American Physical Society

**Temperature effects in accumulation of deuterium and helium at the grain boundaries of a nano-grained tungsten**[1] IGOR KAGANOVICH, Princeton Plasma Physics Laboratory, PREDRAG KRSTIC, Stony Brook University, EDWARD STARTSEV, Princeton Plasma Physics Laboratory — It has been known that defects in tungsten, in particular at the grain boundaries, are preferable sites for deuterium and helium retention. For the case of the nano-grained boundaries, we study by classical molecular dynamics the cumulative retention of deuterium and helium at impact energies below 100 eV as functions of tungsten temperature at models of the dislocation boundaries. We obtain a strong preference of the retention of the impact particles at the boundaries at high temperature of 1000K.

[1]Support of PPPL LDRD grant acknowledged.

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Date submitted: 11 Jul 2014 Electronic form version 1.4