

Table 2 Projected Neutron Production Rates for NSTX Upgrades

NSTX capability	Increase in neutrons per shot relative to present NSTX	MAX neutrons per shot	MAX neutrons per day	Estimated total neutrons per year	MAX neutron rate [1/s]
Present NSTX	1.0	4.0E+14	1.3E+16	8.0E+16	4.0E+14
2nd NBI only	2.5	1.0E+15	3.2E+16	2.0E+17	1.0E+15
New CS only	25.0	1.0E+16	2.4E+17	2.0E+18	2.0E+15
New CS + 2nd NBI	50.0	2.0E+16	4.8E+17	4.0E+18	4.0E+15

Shots per day	Current [MA]	Toroidal field [T]	NBI power [MW]	Pulse length [s]
32	1.2	0.5	6	1
32	1.2	0.5	8	1
24	2	1	5	5
24	2	1	10	5

