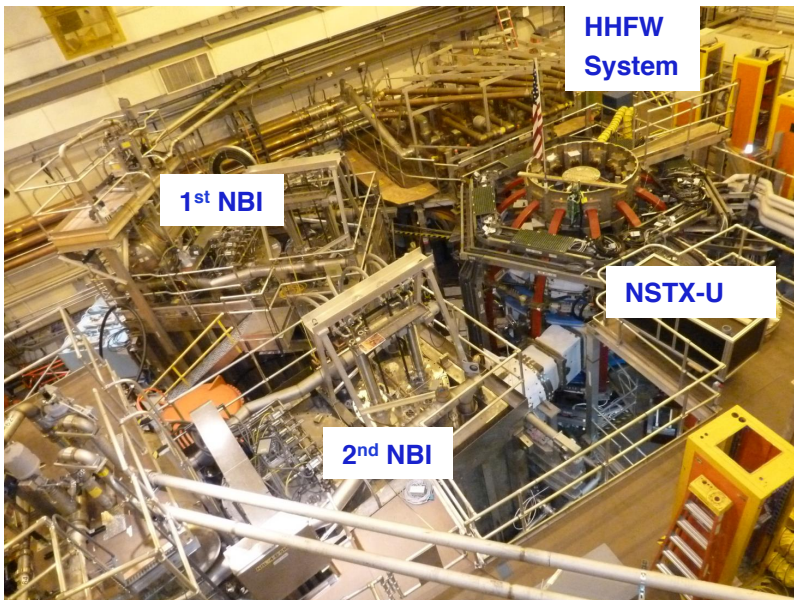


FIP/P8-30: NSTX-U First Plasma Scheduled in February 2015

To provide data base to support ST-FNSF designs and ITER operations

Key issues to resolve for next-step STs

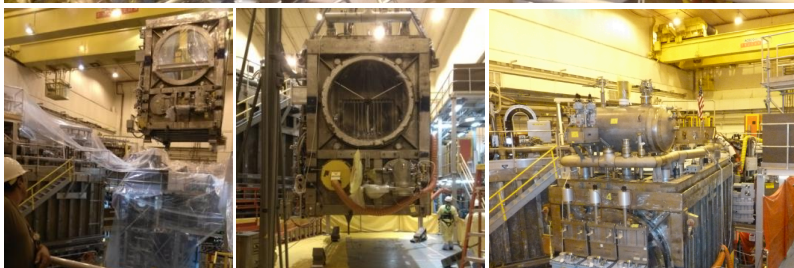
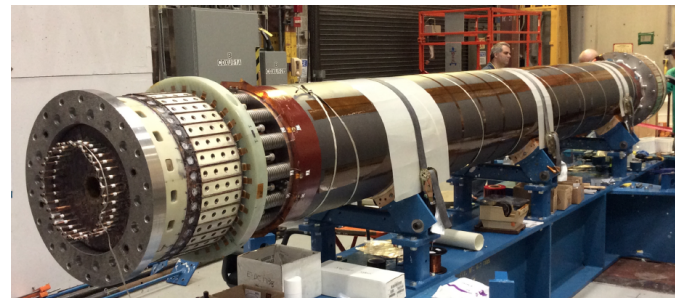
- Stability and steady-state control at high β
- Confinement scaling (esp. electron transport)
- Non-inductive start-up, ramp-up, sustainment
- Divertor solutions for mitigating high heat flux



	R_0 (m)	A_{min}	I_p (MA)	B_T (T)	T_{TF} (s)	R_{CS} (m)	R_{OB} (m)	OH flux (Wb)
NSTX	0.854	1.28	1	0.55	1	0.185	1.574	0.75
NSTX-U	0.934	1.5	2	1	6.5	0.315	1.574	2.1

~ X 5 - 10 increase in $n\tau T$ from NSTX (NSTX-U average plasma pressure) ~ Tokamaks

New Center-Stack Nearing Completion



2nd NBI Being Installed