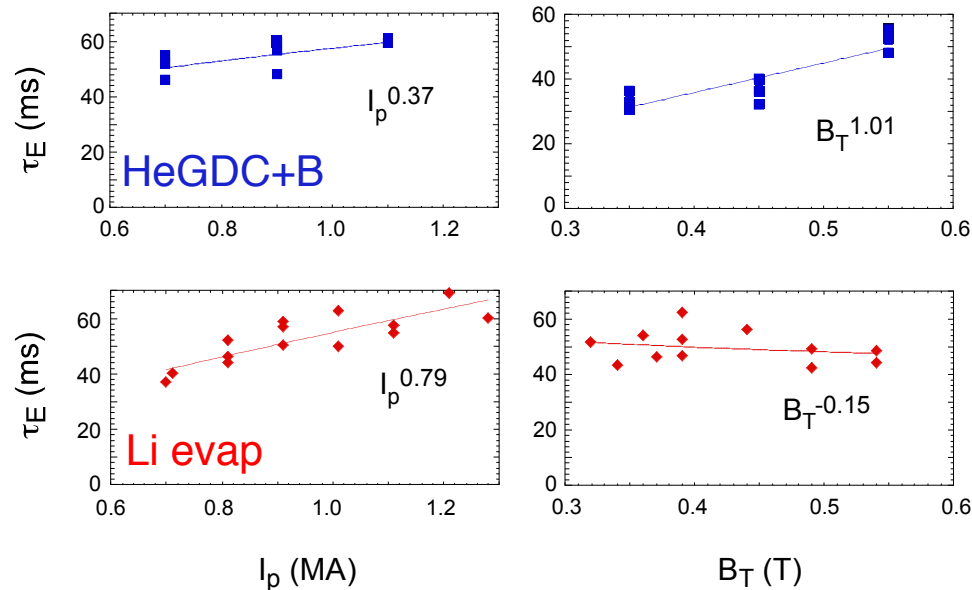


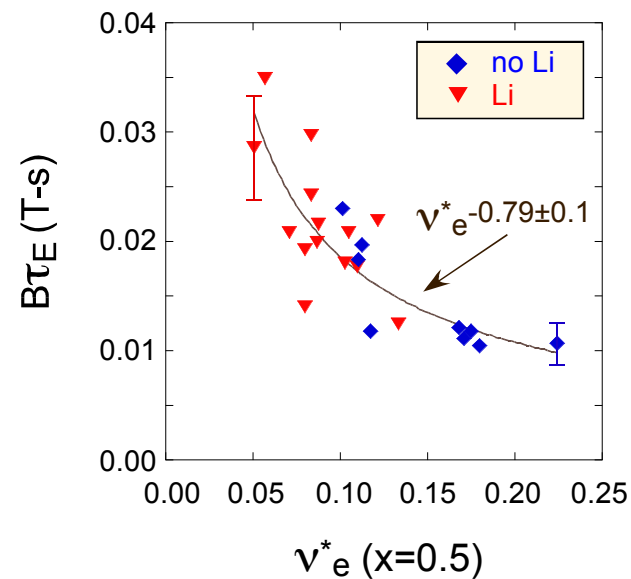
I_p/B_T scaling
S. Kaye et al.

- Directly addresses R15-1 milestone
- Connect back to NSTX scans, extend in parameter space as machine ops allows
- Fix beam power (power scans to be done in 2nd NB XP)
- Boronized plasmas first, the lithiated plasmas
- XP discharge results will be used by multiple TSGs (EP, PED, DIVSOL, MACRO, ASC)
 - Expected that other TSGs will want to submit additional XPs (through their TSG) to obtain additional conditions


Boronized and lithiated plasmas revealed different engineering parameter dependences



- Different parametric dependences reconciled when viewed as a function of collisionality
 - Will this be the same in NSTX-U?



Initial I_p , B_T scaling matrix

I_p (MA)/ B_T (T)	0.7	1.0	1.3	1.6
0.35 or 0.4	T&T+EP		T&T	
0.5	T&T+EP +Ped		T&T +Ped	
0.65				
0.75	 When ops allows			

- Boronized plasmas, 4 MW (1A+1B), $\delta \sim 0.7-0.8$, $\kappa \sim 2.2$
- Diagonal of matrix can give collisionality scan

Next steps

- Repeat initial scan using 4 MW of tangential beam (110, 120 cm): need A modulation or blips
- Repeat scans with Li conditioning
- Increase I_p/B_T as machine ops allow