XP818 ELM Mitigation – 3/3/08 run plan

Task	Number of Shots
1) Create target plasmas	
A) Create q_{95} < 6 target: (generate at least 10 ELMs with approximately even spacing)	
(q_{95} ~ 5.5 is adequate)	
- Use shot 127093 as setup shot, (I_p = 0.8 MA, B_t = 0.5 T), change NBI source C to 1 MW unmodulated	2
- Raise I_p to 0.9 MA; vary B_t to 0.45T, then 0.40T	3
- If q_{95} > 6 and insufficient ELMs, perform startup optimization as per J. Menard to raise q_{min}.	(8)
B) Create q_{95} ramp target	
- Start from low q_{95} target created in step (1A), I_p flat-top to 0.7 MA, ramping up to 1.0 MA; adjust eventual I_p flat-top if needed to create steady ELMs.	4
- If plasma drops out of H-mode, start I_p ramp from 1.0 MA ramping to 0.7 MA	(2)
- Vary B_t to change range of q ramp (optional)	(2)
2) Attempt ELM mitigation with non-axisymmetric fields under normal recycling conditions	
- DC and AC fields:	
i) Apply DC n = 3 field configuration; vary amplitude from 1.5kA	3
ii) Apply AC n = 3; vary f above/below ELM frequency; vary amplitude	4
iii) Apply DC n = 3 + 1 field configuration; vary amplitude from 1.0kA, 0.5 kA	3
iv) Apply AC n = 1 (co-propagating); vary f above/below ELM frequency; vary amplitude	4
v) Apply AC n = 1 (ctr-propagating); vary f above/below ELM frequency; vary amplitude	4
(optionally include n = 3 based on results from (iii) above)	
Total (optional):	27 (12)