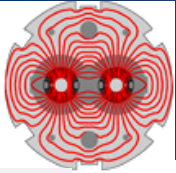
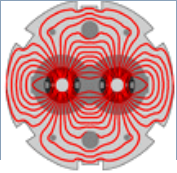


- Record target for 2018:
one+ day with 1 fb⁻¹.



Optics options - pp



1) Keep 2017 configuration → 30 cm.

- 1b) Adiabatic changes:
 - Insert PLP ramp, merge 30cm squeeze,
 - Potentially extend CRS to 80cm,
 - Integrate the CTPPS bump at 40 cm into squeeze between 1m-40cm.

Fast startup baseline

2) Extend telescopic index in the squeeze.

- CRS → see 1) or 1b)
- Start TELE squeeze at 50..60..80 cm.

Is it worth in 2018?

3) Redesign CRS with TELE squeeze.

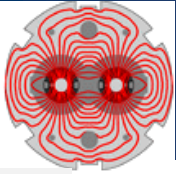
- To gain margin for higher I_b with more effective octupoles (higher β @ MO).

Develop in MD for 2018 post TS2 or Run 3.

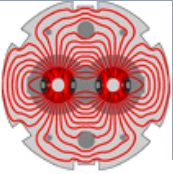
1-3) + squeeze to ~25 cm.

Decouple ion configuration - dedicated setup

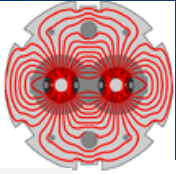
2) And 3) proposals by SF.



Beta* levelling



- Scenario with beta* levelling as ‘option’ to push the luminosity ‘later in the fill’ could be a good compromise.
 - Gain op experience,
 - No critical dependence on the technique – very similar to the introduction of xing levelling.
 - Separation levelling @ 30 cm in case of excessive pile-up / triplet heat load.



Startup



- Scaling the 2017 start-up assuming the 2017 30cm optics configuration as baseline – removing ‘unnecessary’ activities (not MP !) – yields a 2018 startup time of ~ 2 ½ weeks.
 - 2 weeks are too short unless:
 - the machine uptime + activity success are close to 100%,
 - we apply ‘activity cheating’ (move activities into interleaved period at price of more overall setup time).
 - Overlaps with Easter & FCC week (do not even dream of attending !).
 - Activity scheduling
- Minimum time to first stable beams with 3b does not seem to me as a good target. The real goal should be minimum time to SB with >= 1500b.

	Apr			May		
Wk	14	15	16	17	18	19
Mo	Easter 2	9	16	23	30	7
Tu				Scrubbing	1st May	
We	Recommissioning with beam					
Th			Scrubbing			Ascension
Fr						
Sa			Interleaved commissioning & intensity ramp up			
Su						