

Detector configurations for the DGWG studies

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Detector configurations for the DGWG studies

- * We want to define a set of reference detector configurations in FastSim to test the performance of the benchmark channels
 - * Based on input from subsystems
 - * Subsystems will provide details necessary for definition of XML files
 - * Configurations may evolve as studies are being done

This table is a starting point for discussion

	SVT	DCH	PID	EMC	IFR
0	5 layers+L0	“babar”	DIRC	fwd LYSO	baseline
1	5 layers+L0	“babar”+bwd+fwd	DIRC	fwd LYSO	baseline
2	5 layers+L0	“babar”+bwd	DIRC+fwd	fwd LYSO	baseline
3	5 layers+L0	“babar”+fwd	DIRC	fwd LYSO+bwd	baseline
4	5 layers+L0	“babar”	DIRC+fwd	fwd LYSO+bwd	baseline
5	5 layers+L0	“babar”	DIRC	fwd Csl+LYSO+bwd	baseline

“babar” DCH: inner radius close to the outer SVT radius
SVT: what options? Discussion today
EMC: discussion today (likely involving PID and DCH as well)

Backup slides from the meeting on March 17

Goal

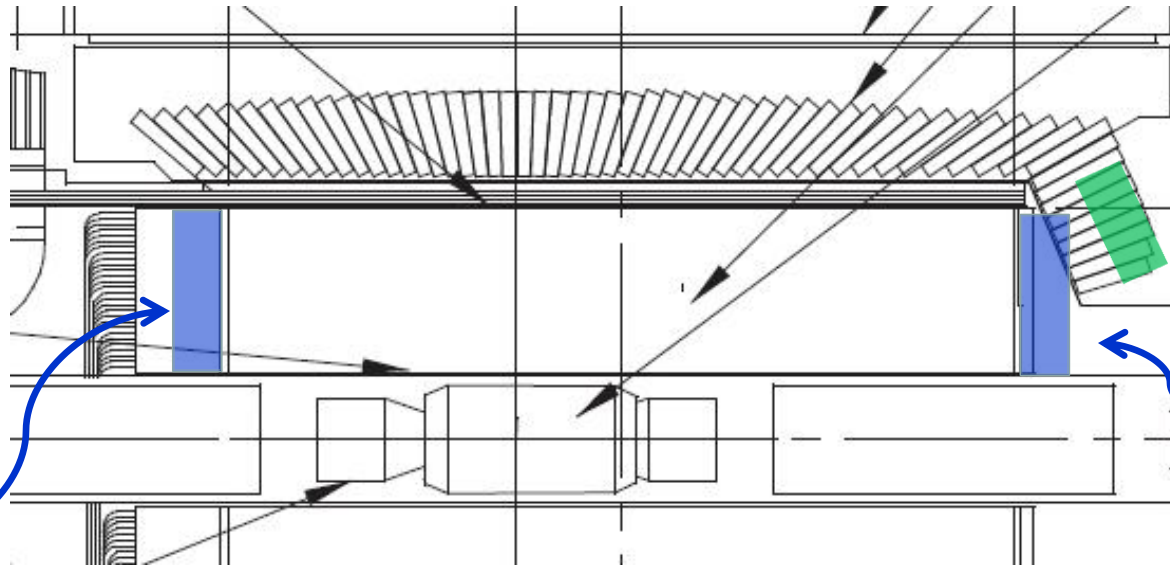
- * Need to define a set of reference detector configurations in FastSim to test the performance of the benchmark channels

	H^+ high $\tan\beta$	Minimal FV	Non-Minimal FV (1-3)	Non-Minimal FV (2-3)	NP Z-penguins	Right-Handed currents
$B(B \rightarrow X_s \gamma)$		■		●		●
$A_{CP}(B \rightarrow X_s \gamma)$				■		●
$B(B \rightarrow \tau \nu)$	■ -CKM					
$B(B \rightarrow X_s l^+ l^-)$				●	●	●
$B(B \rightarrow K \nu \bar{\nu})$				●	■	
$S(K_S \pi^0 \gamma)$						■
β			■ -CKM			●

+ $\tau \rightarrow \mu \gamma$

- Golden mode for a given scenario
- Non-golden, but still sensitive to deviations from the SM
- CKM requires high precision on CKM parameters (obtainable with SuperB)

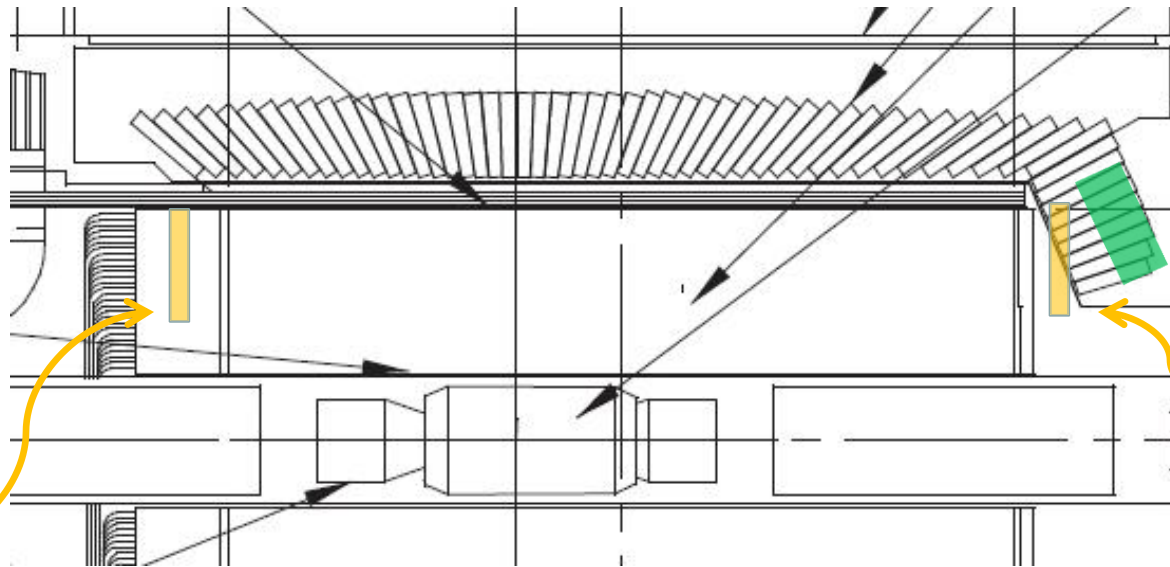
DCH



extended DCH
If NO bwd EMC/PID
and the DCH electronics
space is reduced w.r.t. Babar

extended DCH
If LYSO fwd EMC
and NO fwd PID

PID



backward PID
If NO bwd EMC
and the DCH electronics
space is reduced w.r.t. Babar

We're not considering it as a major option

forward PID
If LYSO fwd EMC

EMC

