

HL-LHC Cryogenics Required Clarifications (2/2)

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Chamonix workshop 31 Jan. 2018

Simplification of the QRL if we leave Q4 and Q5 as is in IR1 and IR5

Easy to imagine (homogeneous origin for power, cryo cooling, possible savings),

For technology, LHC would remain up to Q4 new position, and Hilumi would go up to Crab cavities

Integration to be looked at (Spring 2018), Access sectorisation, junction with safety tunnel ...





Example for 5R

D2

View from integration views DB



Q6

HL

Present limit

for QRL/QXL

NEW Jan'18

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Q4-Q5 could remain at 4.5K (already the case for Q6), and at the same place ?!?

- Access / safety / sectorisation ?
- Powering from existing RR & DFBL, corresponding cooling of DFBL and SAM's to be with same origin (QRL or QXL but not mixed)
- Q4 and Q5 possibly with remote alignment, compatible with QRL ?
- 3D models to be implemented and then integrated (Q2-2018 for CRG)



LHC