



# Civil engineering reduction study

Ref catia smarteam : ST0778219\_01

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UR : from 3.5 m to 2.9 m ( $\approx$  -20% of volume)

UL : from 3 m to 2.5 m (if cost less).

BUT UL17 with new alcove to put cryo box.

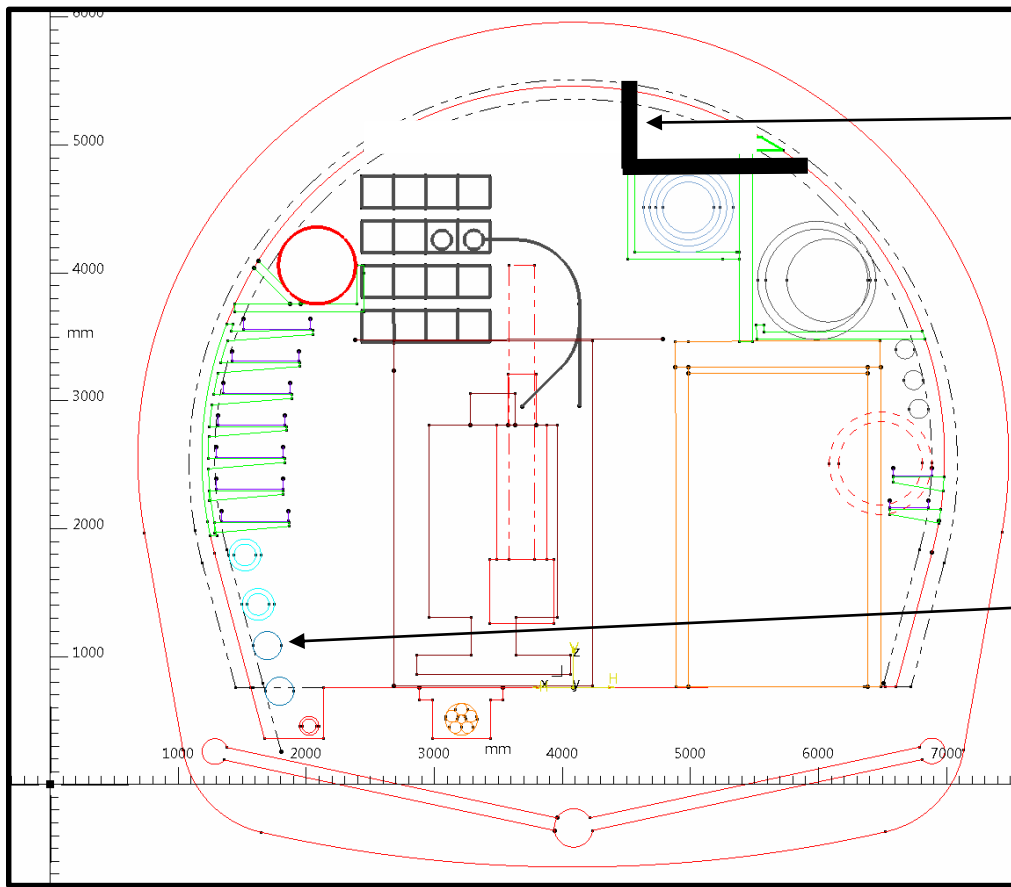
UA : from 3 m to 3.1 m (new rf technology and power in UA instead SR BUILDING)

US-UW : section reduction and UW possible reduction of length 5 m (-8%) (only 2 cryomodules). (study ongoing).

US possible reduction 4-5 m

PM : from 10.2m to 9.7 m ( $\approx$  -8%) : (study ongoing).

reduction of tremie from 8 x 3.4 to 7.5 X 2.9 (STUDY)

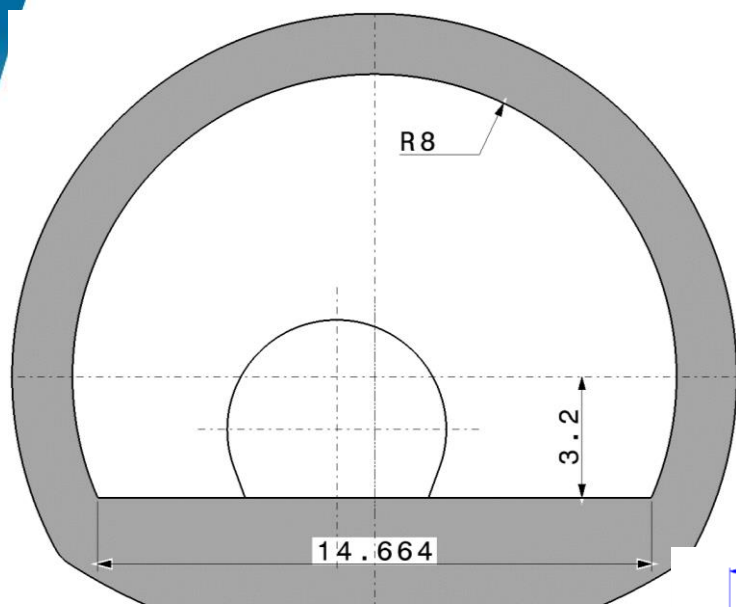


OPTION 2

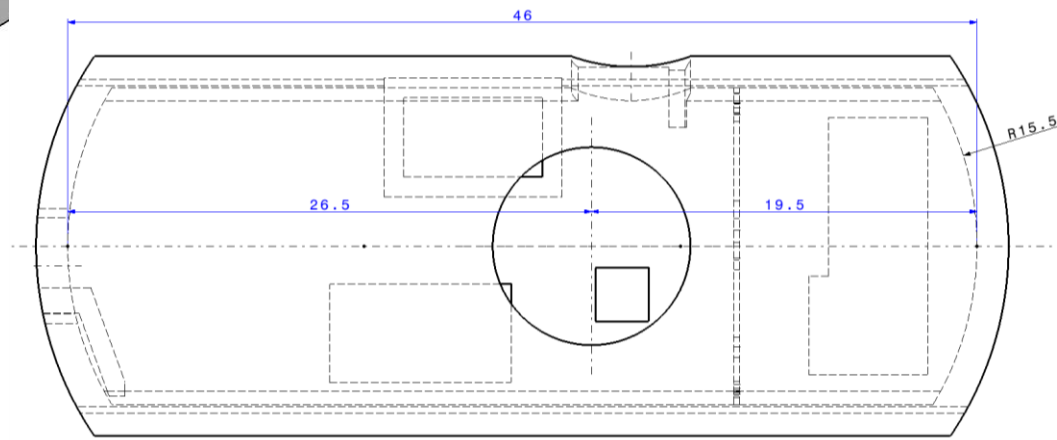
SMOKE EXTRACTION  
ABOVE THE TOP OF  
TUNNEL

0.52 M2

ONLY ONE CIRCUIT  
OF DEMI WATER (RF  
+ PC)

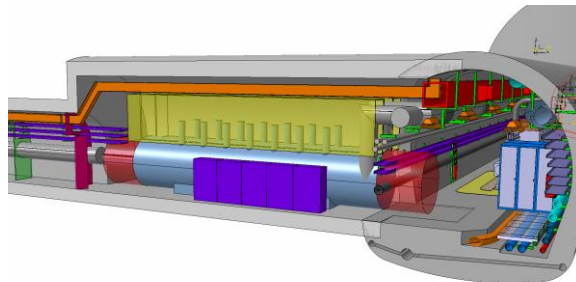
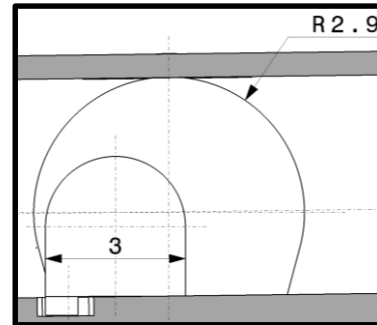
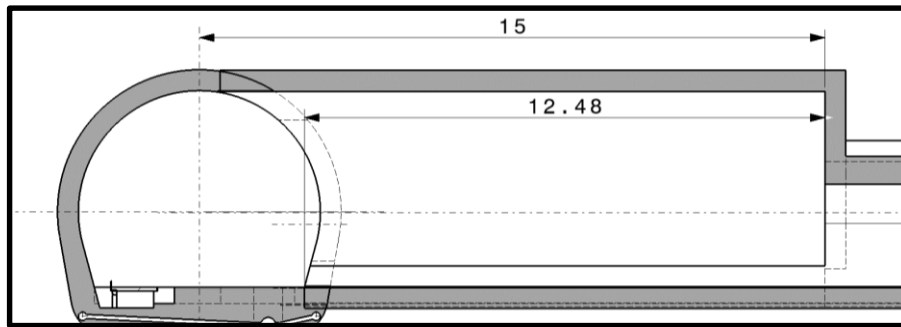


US reduction	(-25% volume)
Radius 8 m	(8.45 baseline)
Length 46 m	(55 baseline)

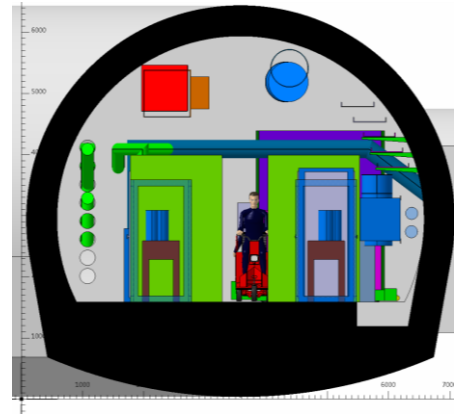
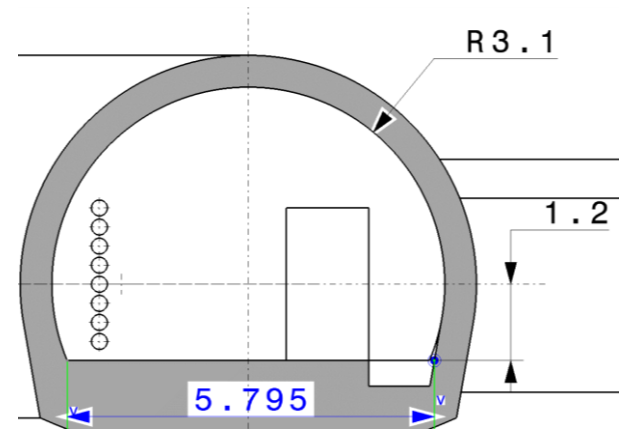
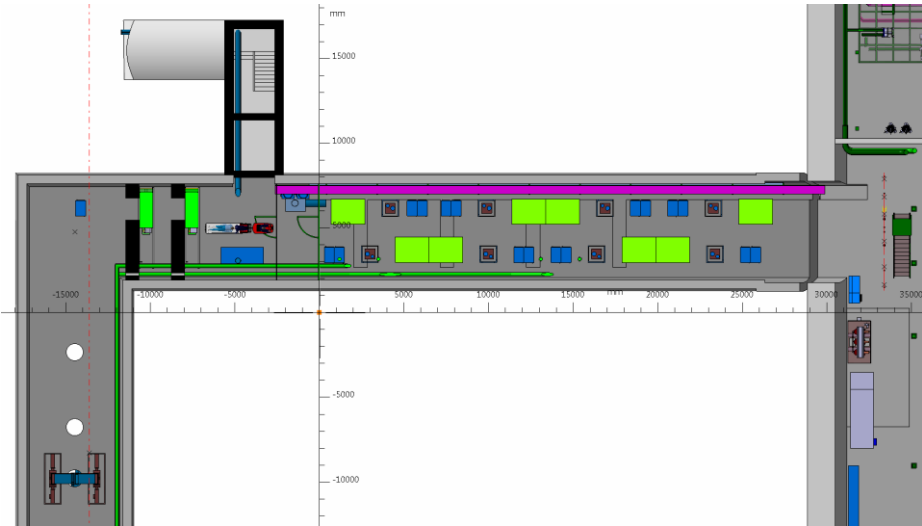


UL 13 : STAY AS BASELINE

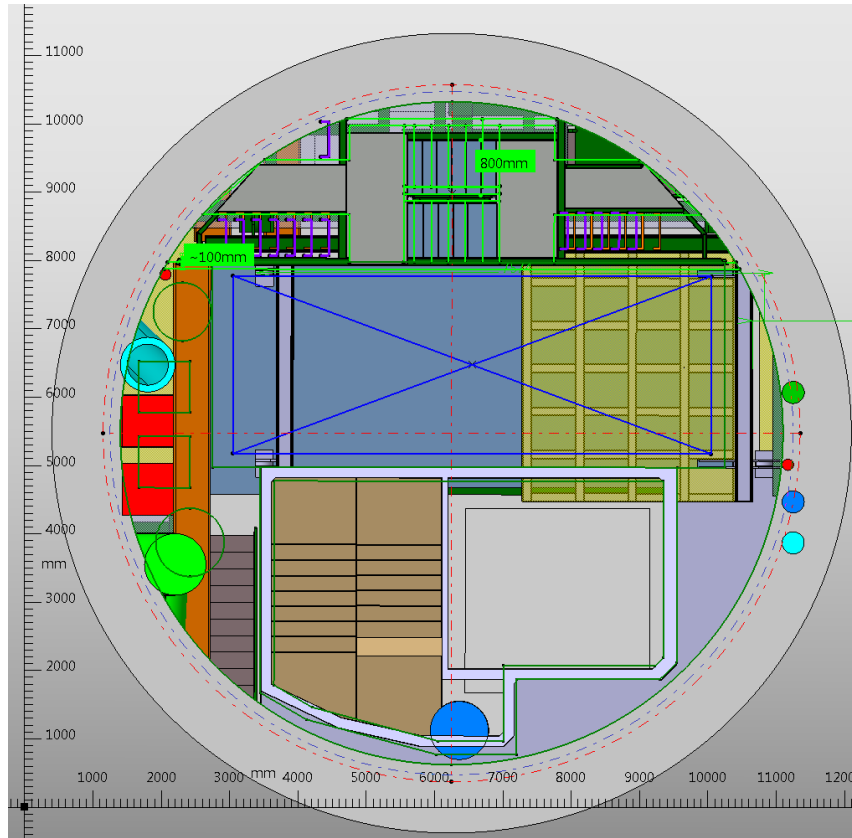
BUT UL 17 : Need alcove for cryo.-box



UA : R 3.1



# PM at $\varnothing$ 9.7 m





***thanks***