

# TTC & BST Layout Status

May 2007

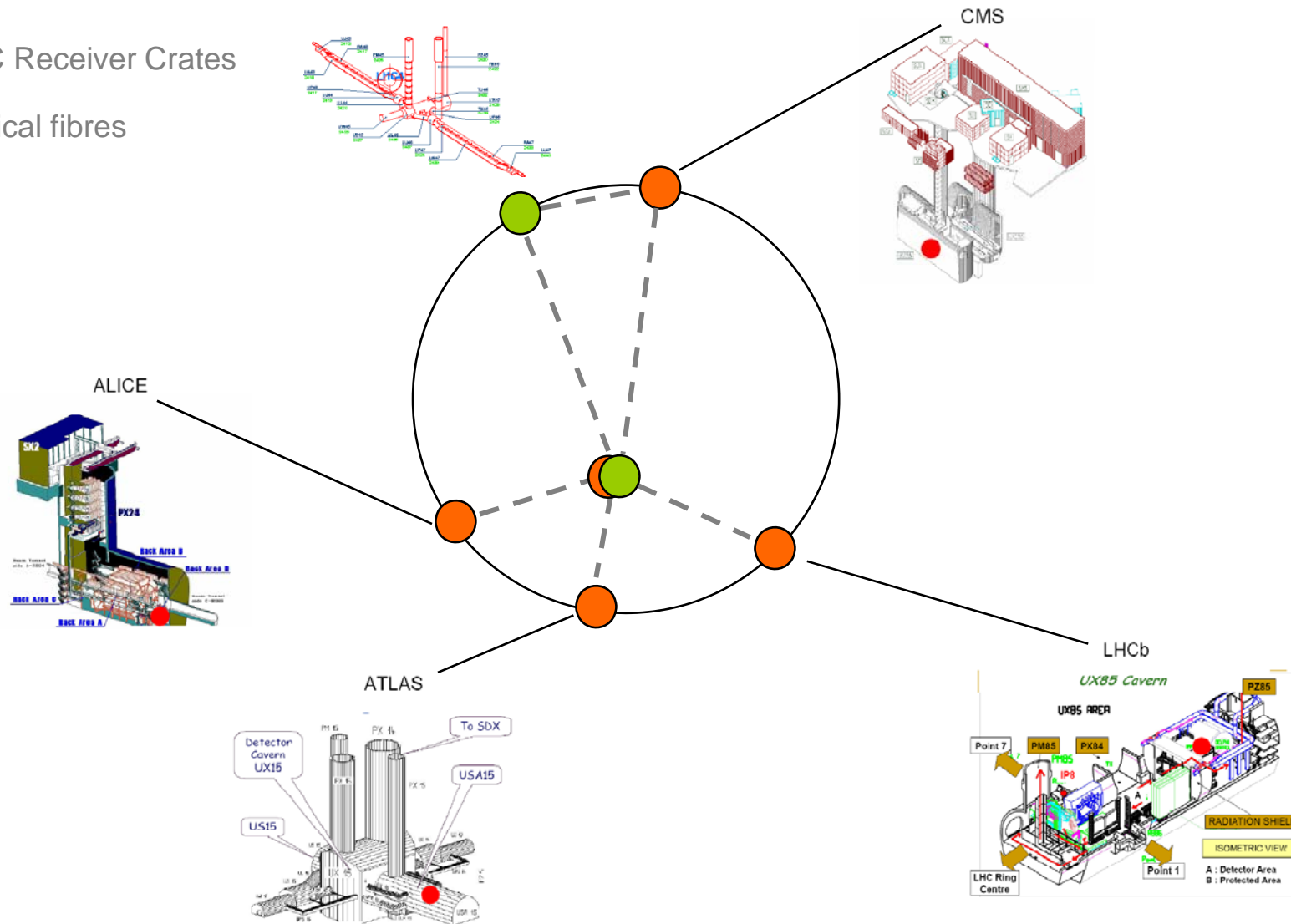
- Overview and vocabulary
- Common TTC fibres
- Common BST fibres
- TTC & BST fibres in the experiments
- Conclusion & schedules

# OVERVIEW

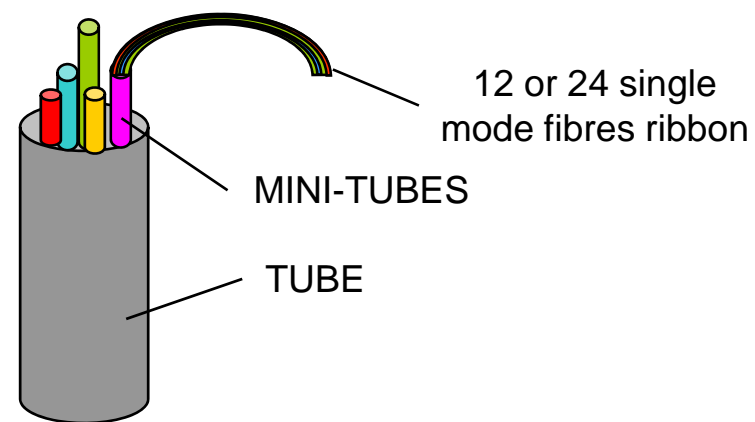
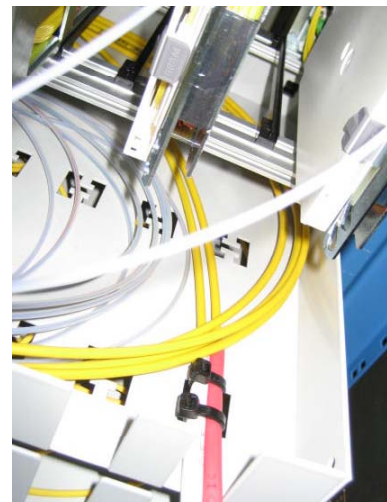
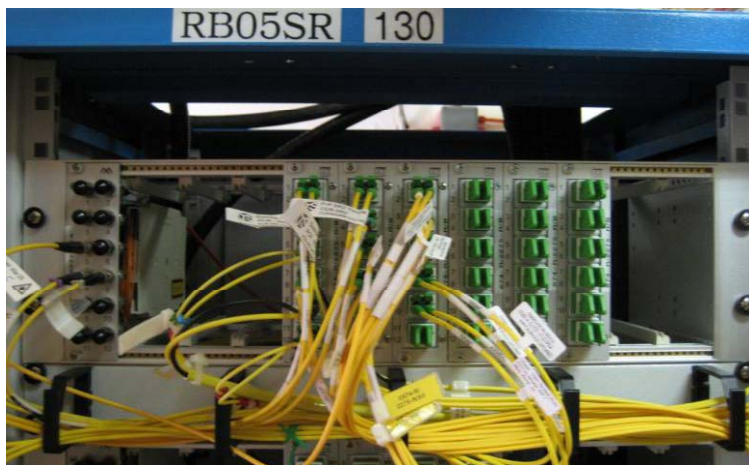
● AB/RF Tx and Rx modules

● TTC Receiver Crates

- - Optical fibres



# VOCABULARY



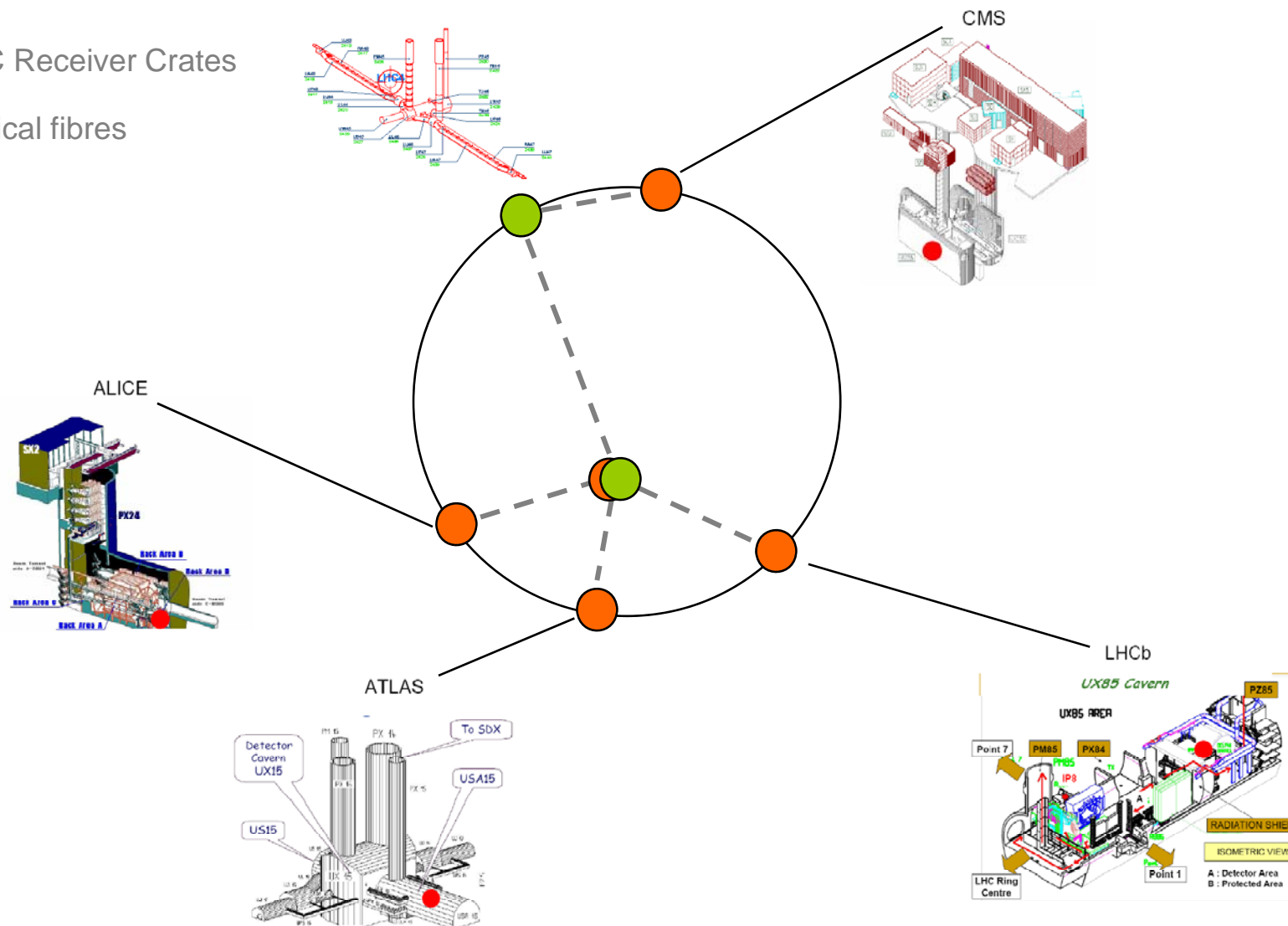
- Overview and vocabulary
- **Common TTC fibres**
- Common BST fibres
- TTC & BST fibres in the experiments
- Cost Estimation
- Schedules

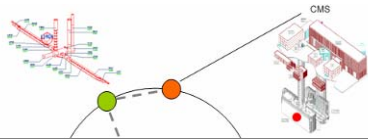
# TTC fibres layout

● AB/RF Tx and Rx modules

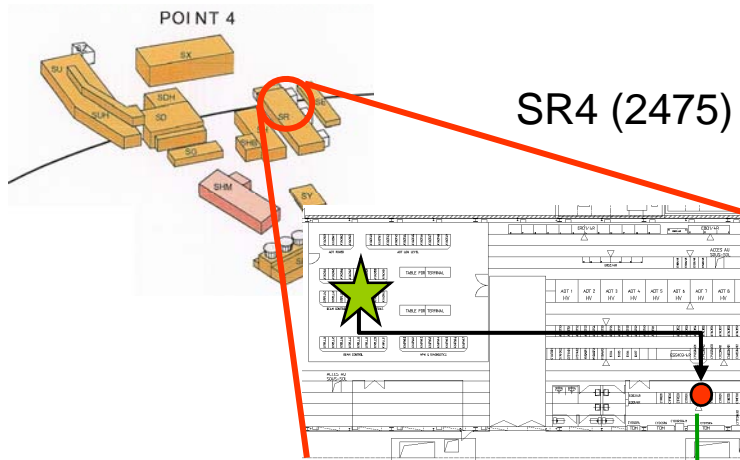
● TTC Receiver Crates

--- Optical fibres



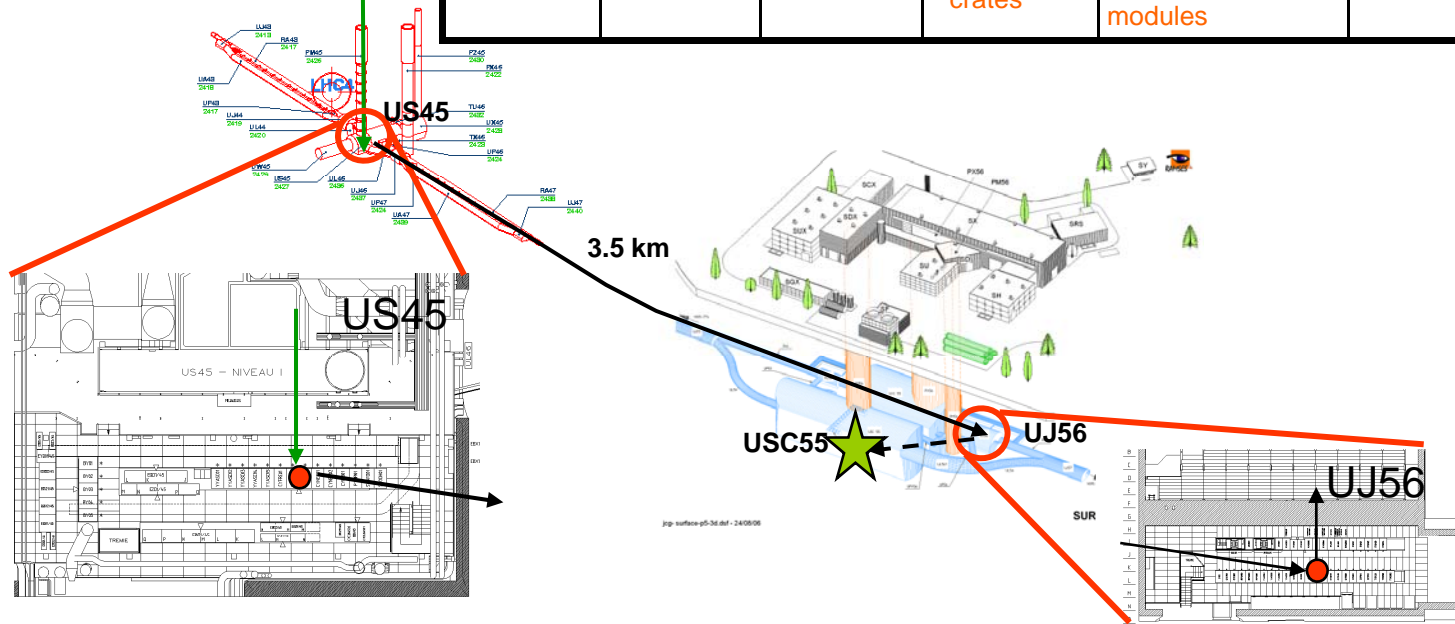


# TTC fibres [SR4 to CMS]



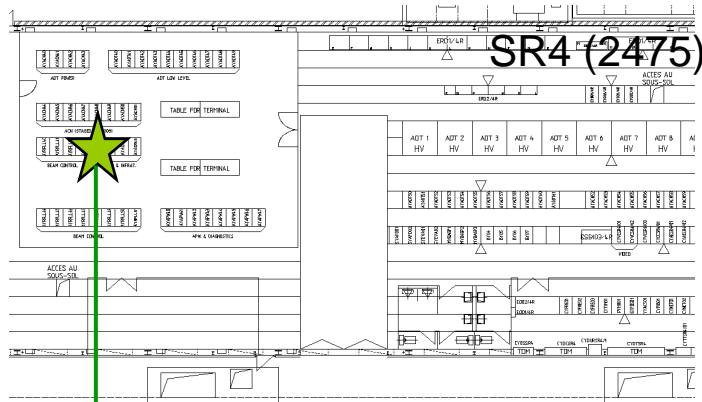
SR4 (2475)

FROM	TO	REQUIRED SIGNALS	AVAILABLE EQUIPMENT	TO BE INSTALLED	PAID BY
SR4	SR4- LCR	6	Minitubes, crates	24 fibres to be blown, terminated + modules	PH/ESS + EXP ?
SR4-LCR	US45	6	16 fibres	X	-
US45	UJ56	6	Minitubes, crates	24 fibres to be blown, terminated + modules	PH/ESS + EXP ?
UJ56	USC55	6	Minitubes, crates	24 fibres to be blown, terminated + modules	<b>CMS</b>



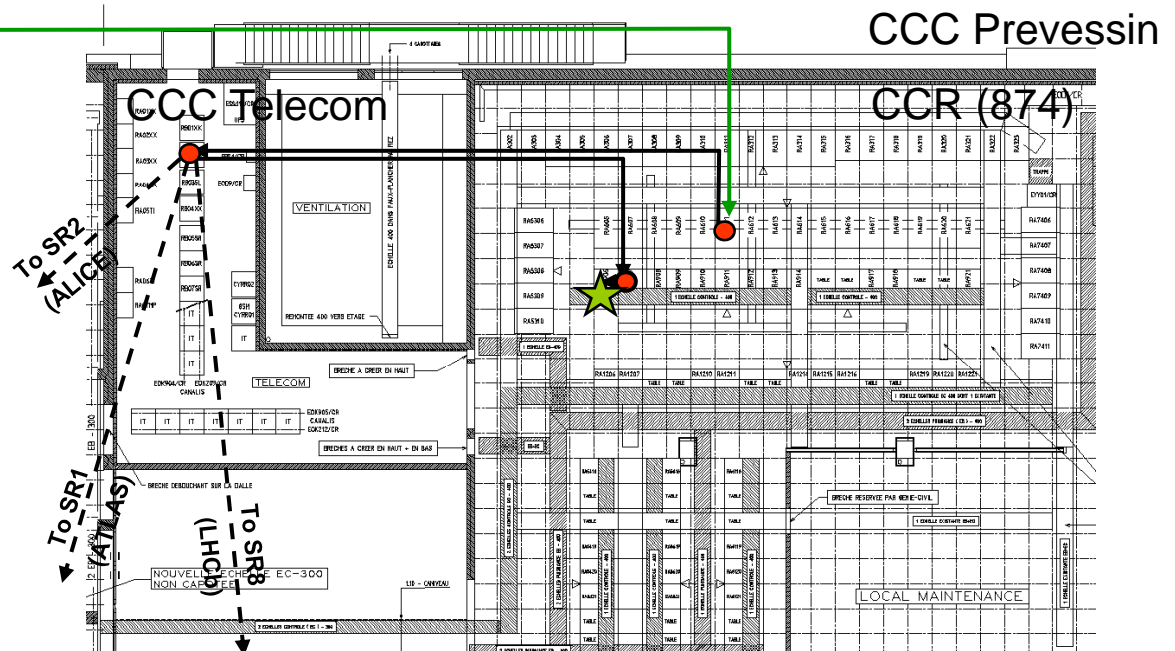
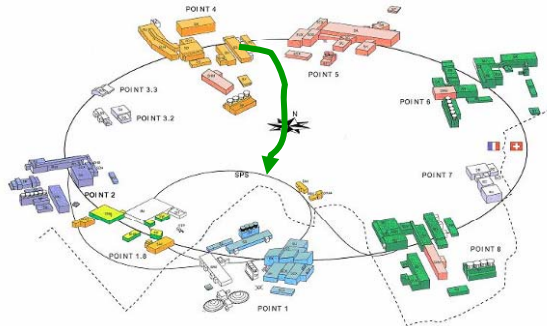


# TTC fibres [SR4 to CCR]

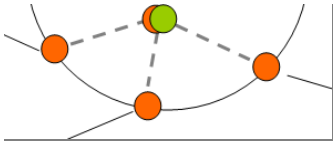


10 km

FROM	TO	REQUIRED SIGNALS	AVAILABLE EQUIPMENT	TO BE INSTALLED	PAID BY
SR4	CCR-RF	6	72 fibres	X	-
CCR-RF	CCC-T (splitters IN)	6	Minitubes, 1:4 splitters	24 fibres to be blown, terminated + crates & modules	PH/ESS + EXP
CCC-T (splitters OUT)	CCT-907	6	Crates, modules	patches	PH/ESS + EXP
CCT-907	CCR-907	6	24 fibres		
CCR-907	CCR-TTC	6	-	patches	-

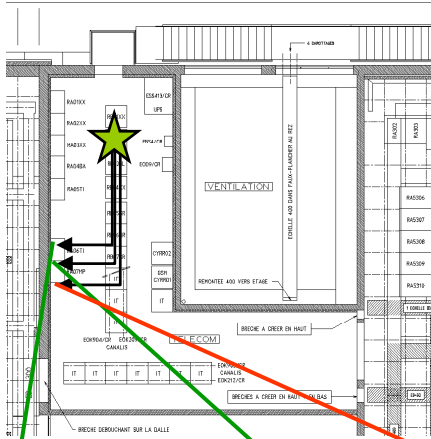






# TTC fibres [CCR to SR1-2-8]

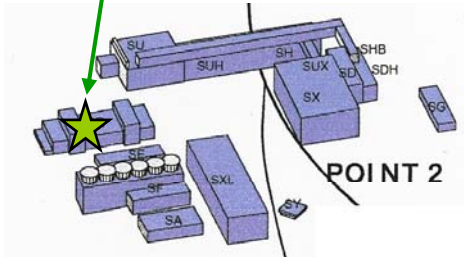
## CCC - Telecom



FROM	TO	REQUIRED SIGNALS	AVAILABLE EQUIPMENT	TO BE INSTALLED	PAID BY
CCT (splitters)	CCT-SR	6	Crates, Modules	6x3 patches	PH/ESS + EXP
CCT-SR1	SR1	6	fibres	X	-
CCT-SR2	SR2	6	fibres	X	-
CCT-SR8	SR8	6	Tubes, minutubes	288 fibres	LHC

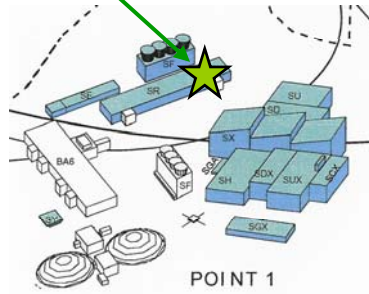
5 km

SR2 - ALICE



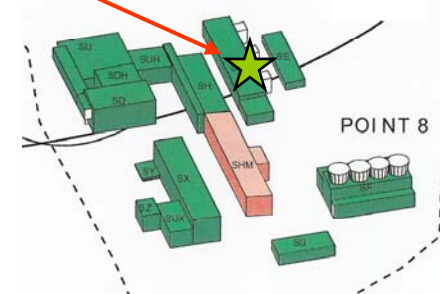
4 km

SR1 - ATLAS



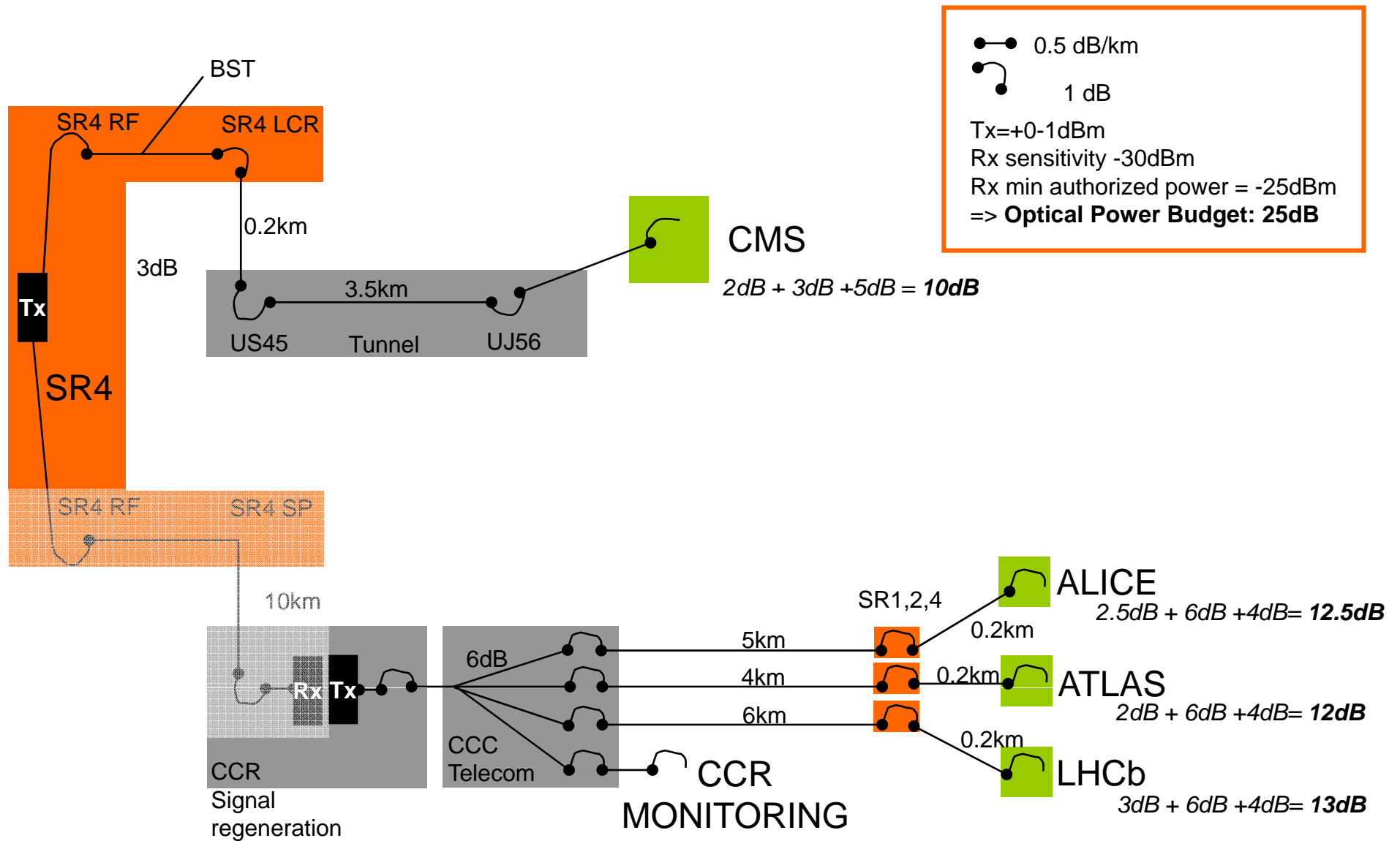
6 km, ready end of May

SR8 - LHCb





# Optical Power Budget



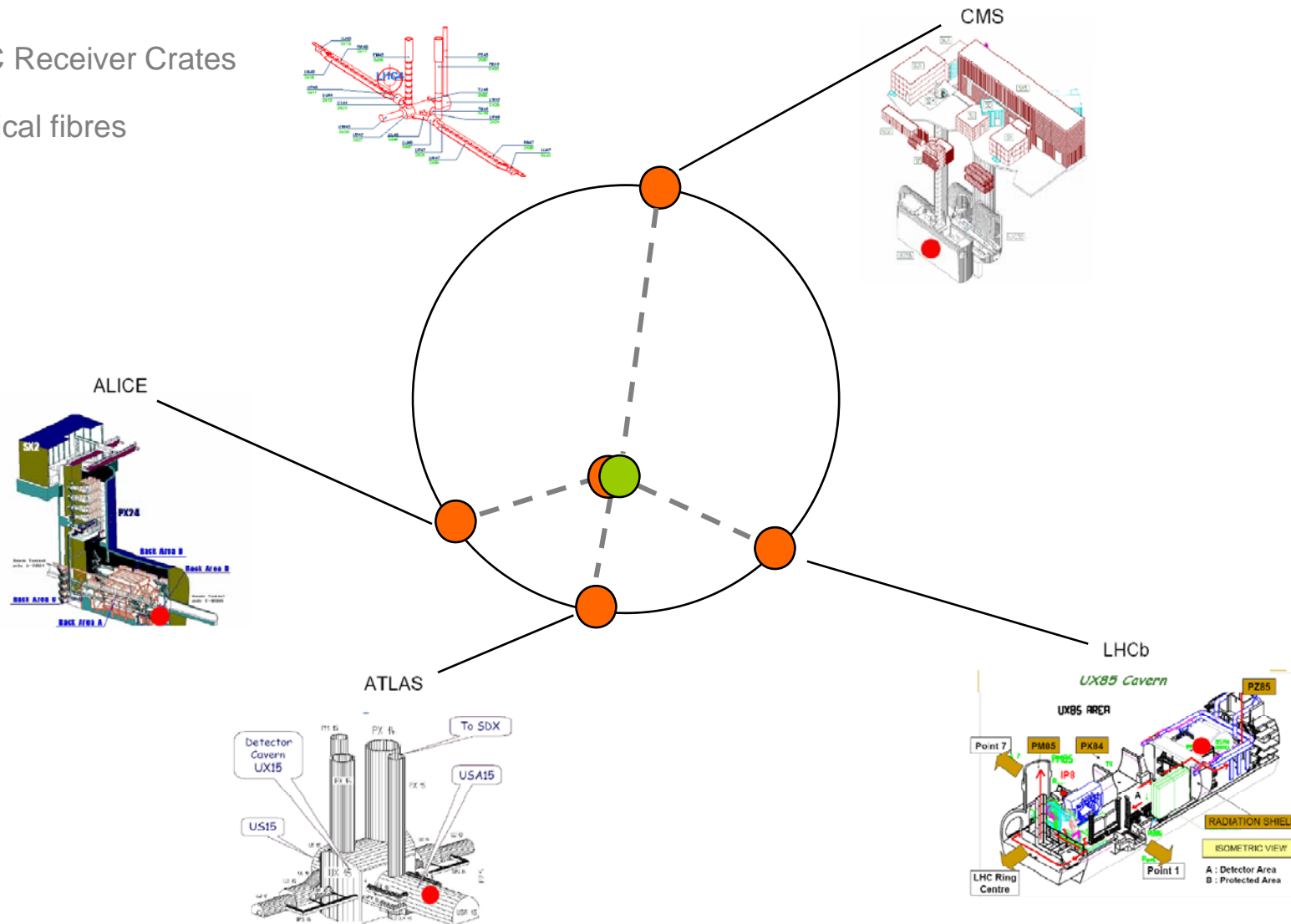
- Overview and vocabulary
- Common TTC fibres
- **Common BST fibres**
- TTC & BST fibres in the experiments
- Conclusion & schedules

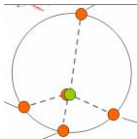
# BST fibres layout

● BST Master / transmitters

● TTC Receiver Crates

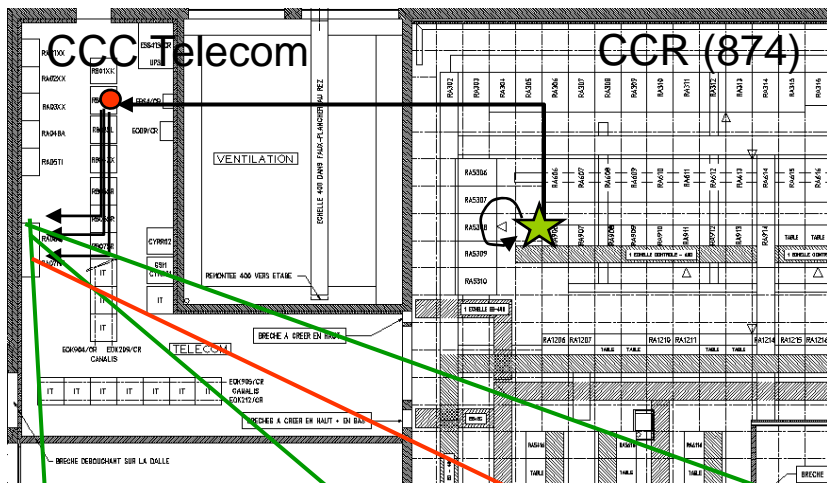
--- Optical fibres





# BST fibres [CCR to SR 1-2-5-8]

## CCC Preveessin



FROM	TO	REQUIRED SIGNALS	AVAILABLE EQUIPMENT	TO BE INSTALLED	PAID BY
CCR-BST	CCT-BST	3	Tubes, minitubes	24 fibres to be blown, terminated + crates & modules	PH/ESS + EXP
CCT-BST	CCT-SR	3	Minitubes, 1:4 splitters	24 fibres to be blown, terminated + crates & modules	PH/ESS + EXP
CCT-SR1	SR1	3	fibres	X	-
CCT-SR2	SR2	3	fibres	X	-
CCT-SR8	SR8	3	Tubes, minitubes	144 fibres	-
CCT-SR8	SR5	3	Tubes, minitubes	X	-

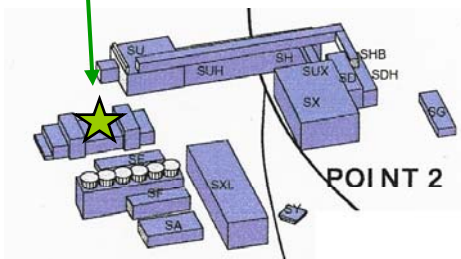
5 km

4 km

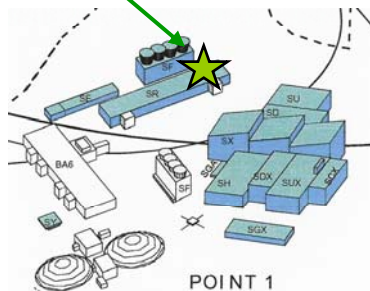
6 km

10 km

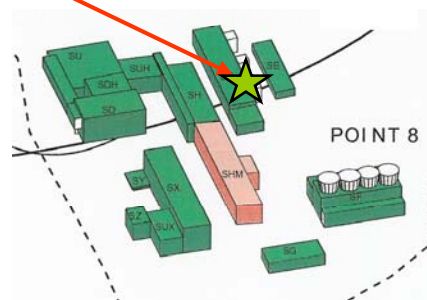
### SR2 - ALICE



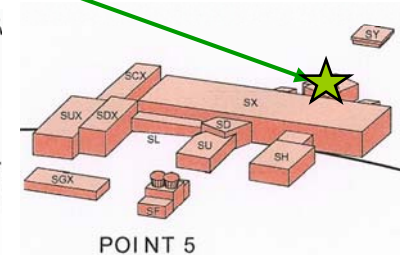
### SR1 - ATLAS



### SR8 - LHCb



### SR5 - CMS



- Overview and vocabulary
- Common TTC fibres
- Common BST fibres
- **TTC & BST fibres in the experiments**
- Conclusion & schedules

## TTC & BST inside the experiments

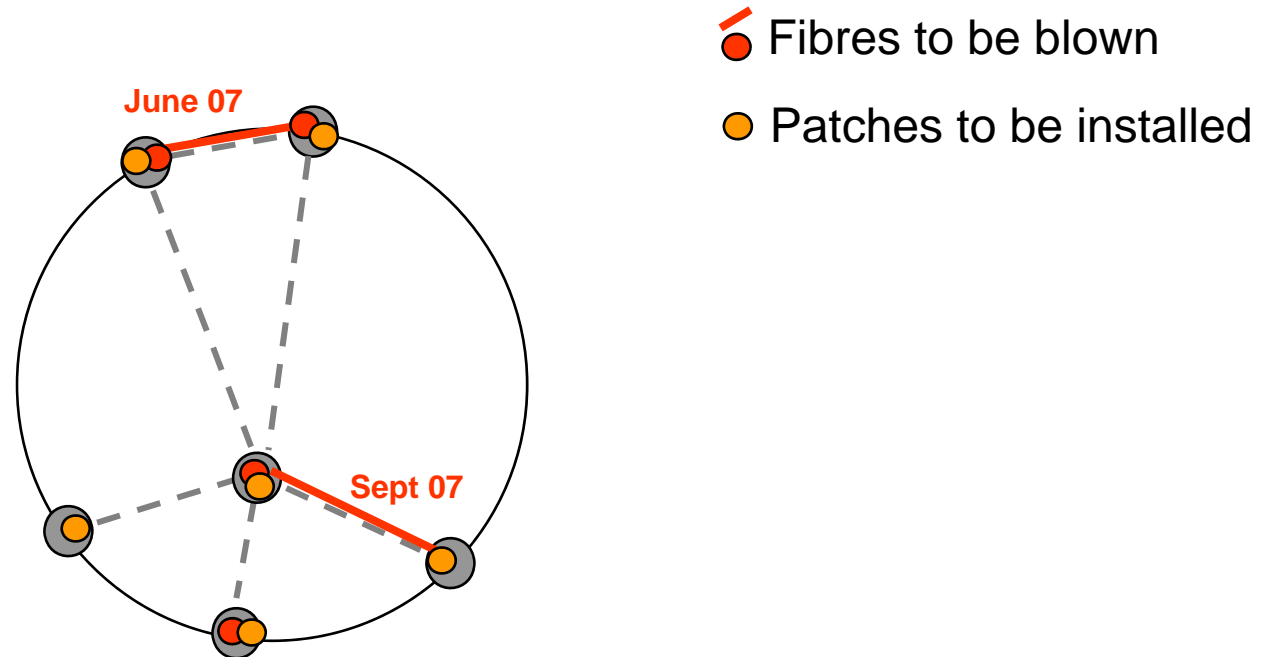
- Fibre installation and patching directly done between experiments and TS/EL (Nicolas Zaganidis in charge of the TTC/BST fibre installation campaign)
  - For ALICE and LHCb, the 9 fibres are included in their fibres installation scheme
  - For ATLAS and CMS, the installation has been requested by PH/ESS in the framework of the TTC/BST installation
- To be paid by each experiment

ALICE	SR2 -> UX25	9	ALICE fibre infrastructure
ATLAS	SR1 -> USA15	9	Minitubes to be installed, Fibres to be blown, patch panel to be installed
CMS	SR5 -> USC55	3	Agreement to find with IT
	UJ56 -> USC55	6	Fibres to be blown
LHCb	SR8 -> UXA-D3A	9	LHCb fibre infrastructure

- Overview and vocabulary
- Common TTC fibres
- Common BST fibres
- TTC & BST fibres in the experiments
- **Conclusion & schedules**



# CONCLUSION & SCHEDULE



## ■ Schedules:

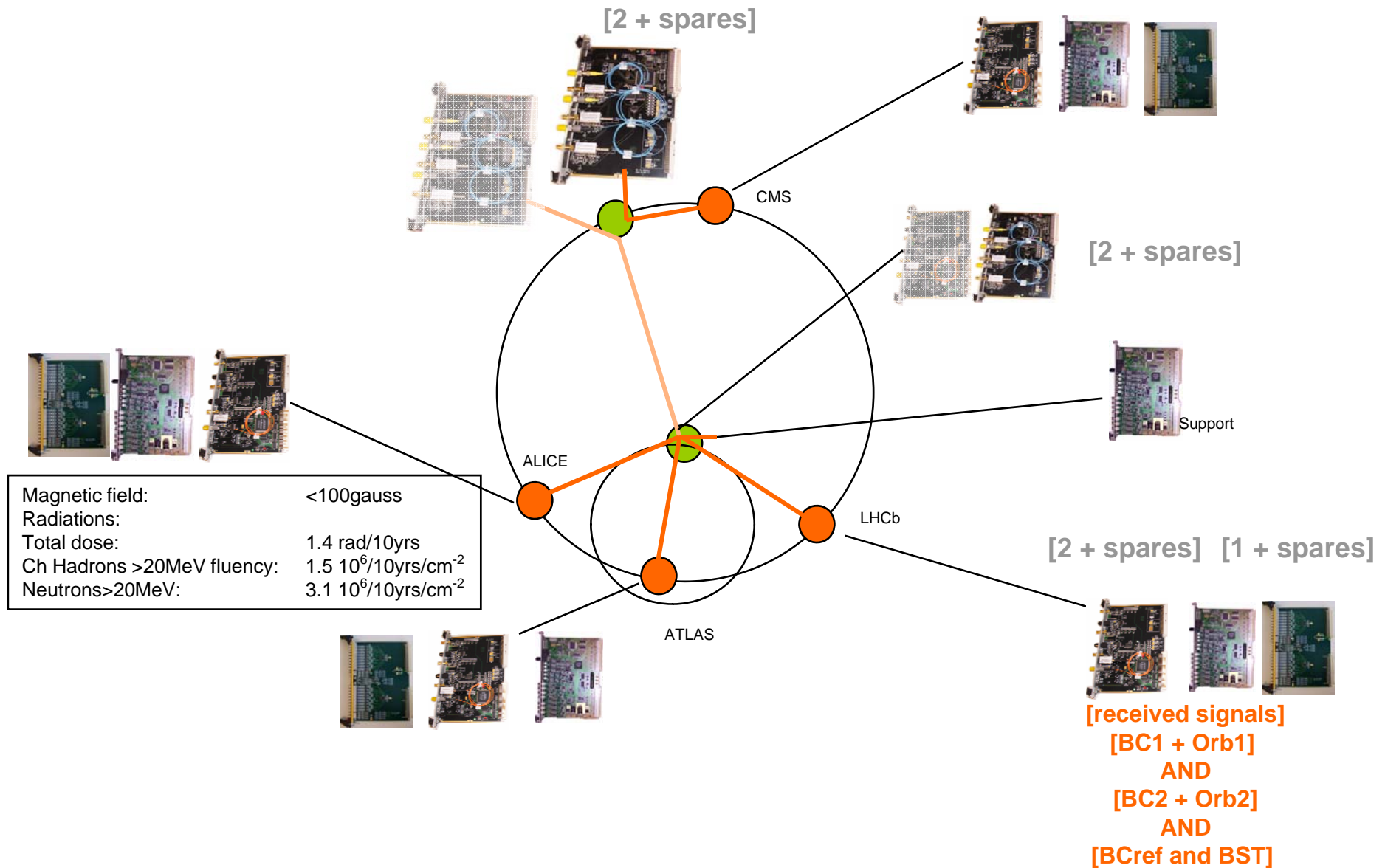
- The general infrastructure can be ready for mid-July (-> SR)
  - except LHCb (civil engineering required)
- The special installations in the experiments may take some more time. Everything should be ready for end of September.

## ■ Cost:

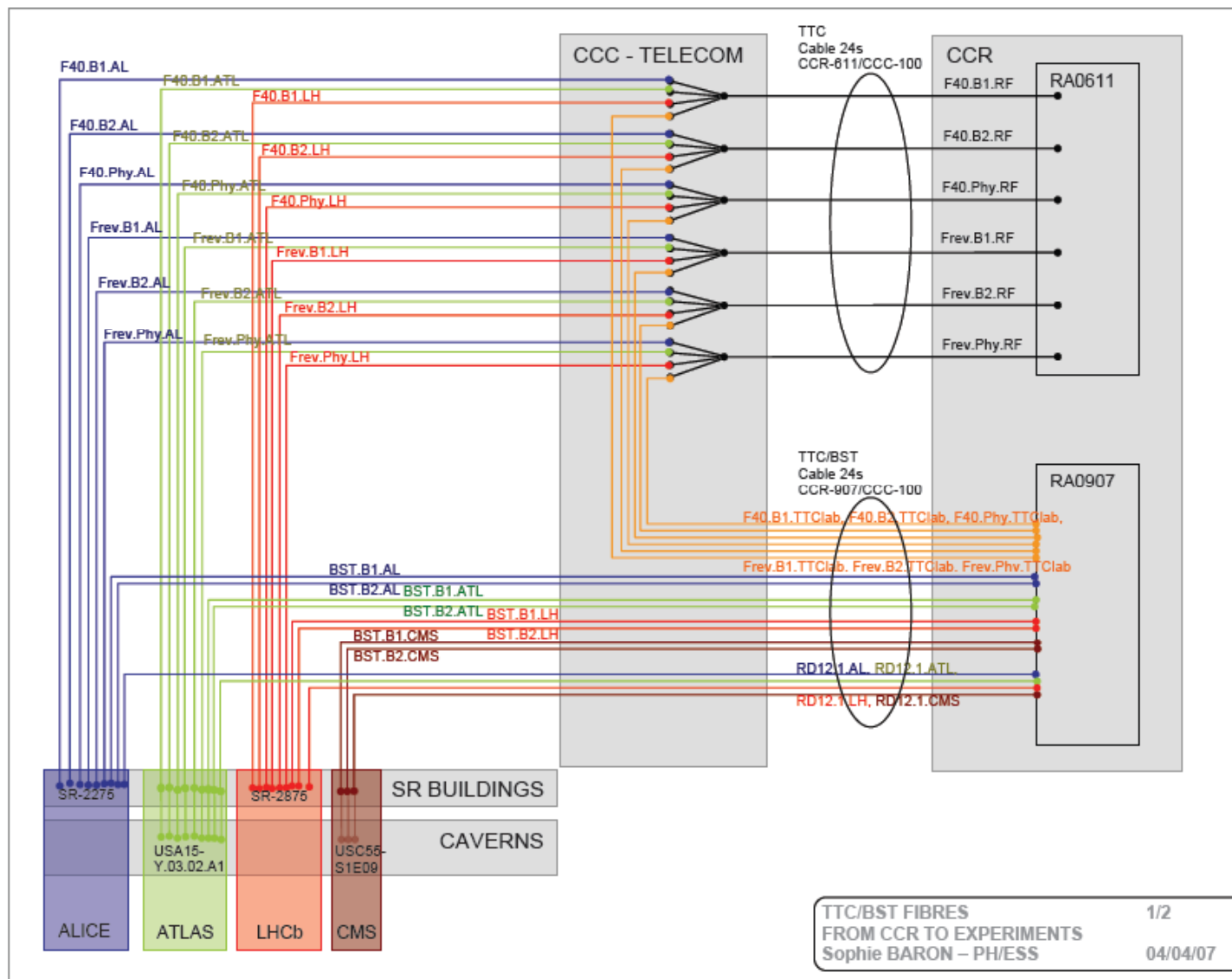
- An estimation will be sent to the experiments during the week

- LHC timing issues
- TTC/BST fibres layout
- Status of OTx and ORx for timing signals
- Status of TTC upgrade system
- Financing
- Schedules
- Conclusion

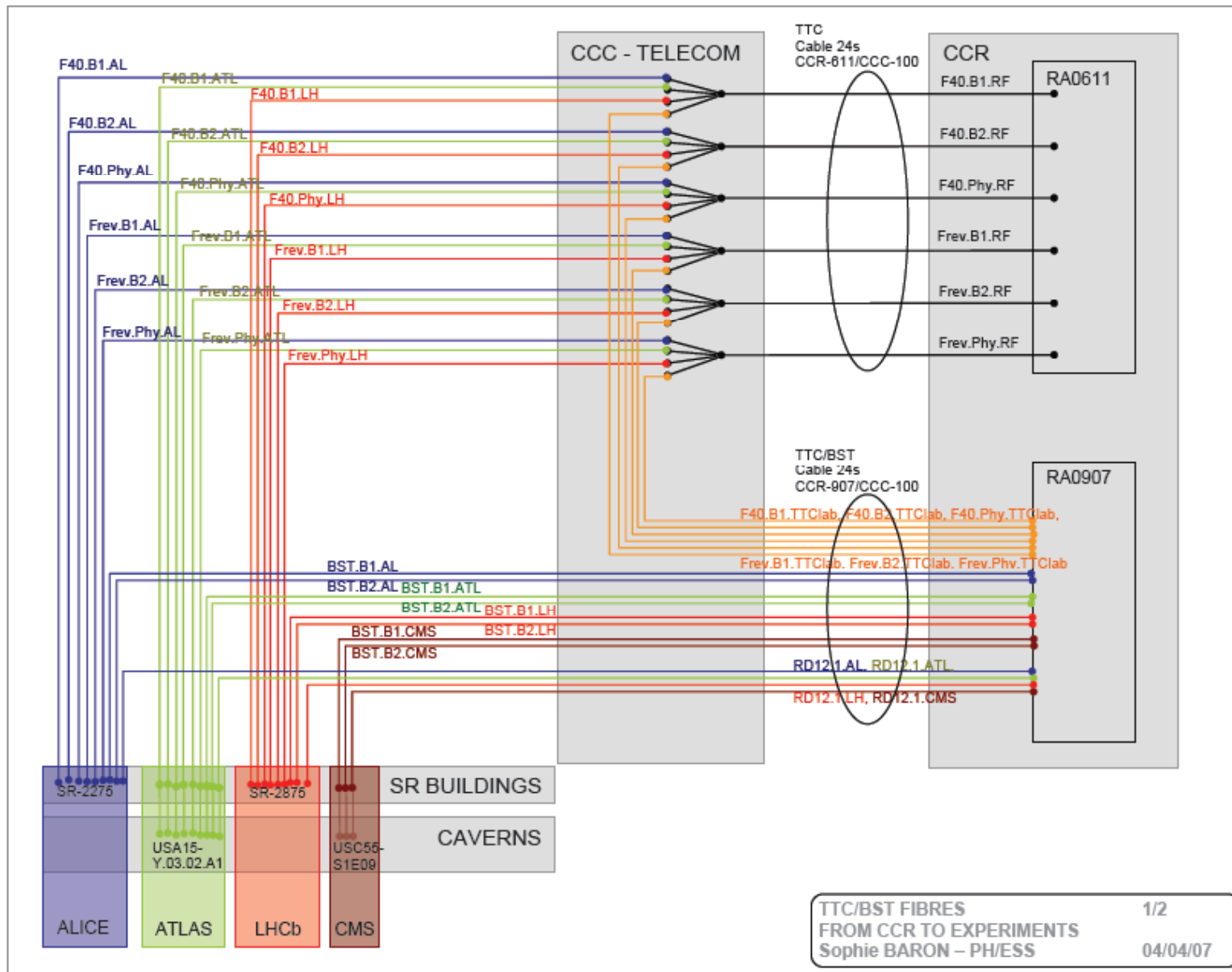
# TTC UPGRADE [overview]



# TTC & BST fibres [synoptics]



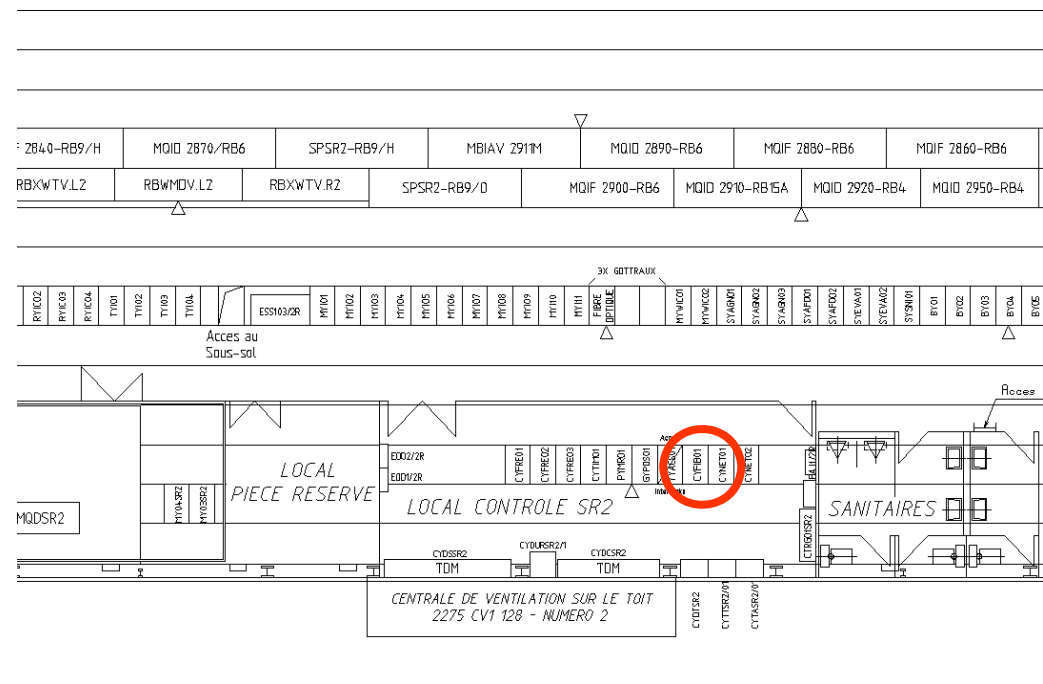
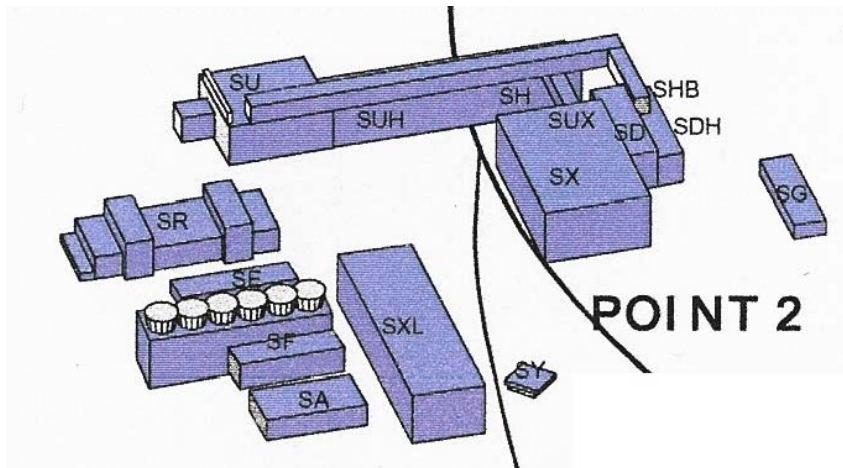
# TTC & BST fibres [synoptics]



TTC/BST FIBRES FROM CCR TO EXPERIMENTS  
 Sophie BARON - PH/ESS 1/2  
 04/04/07



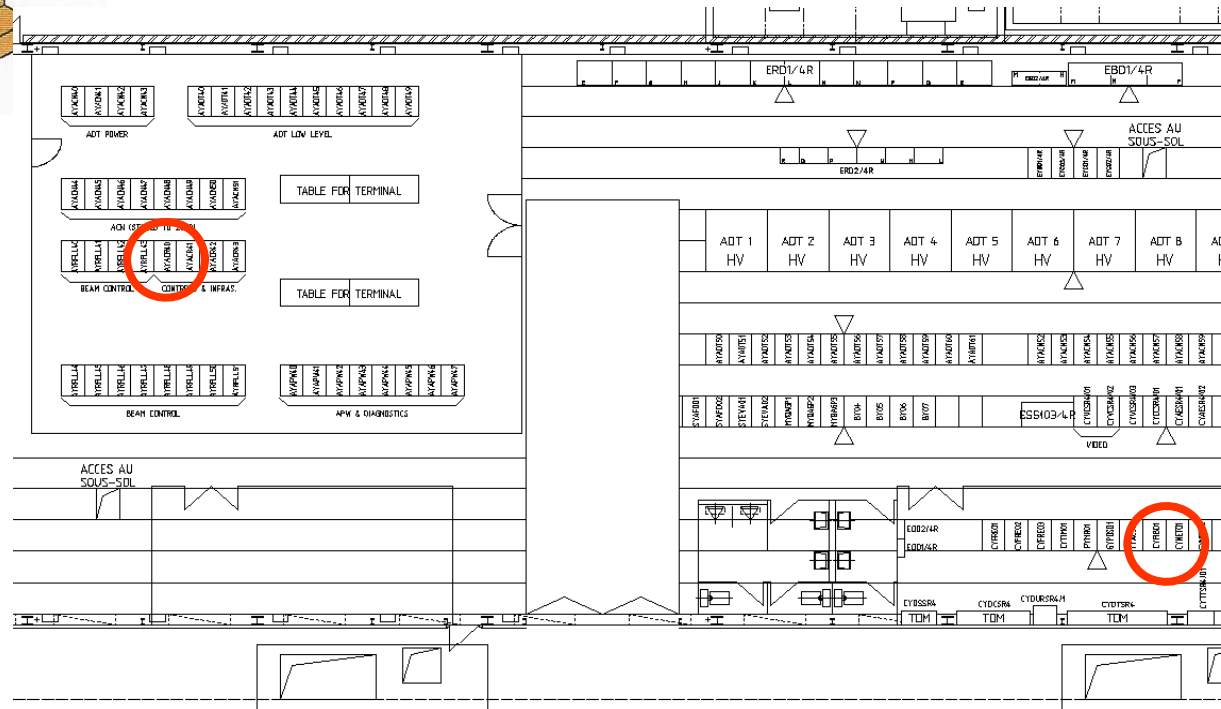
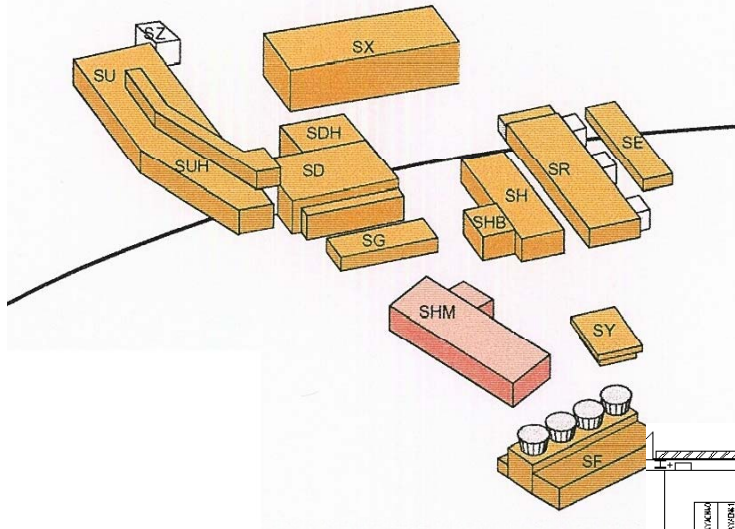
# P2 – SR2



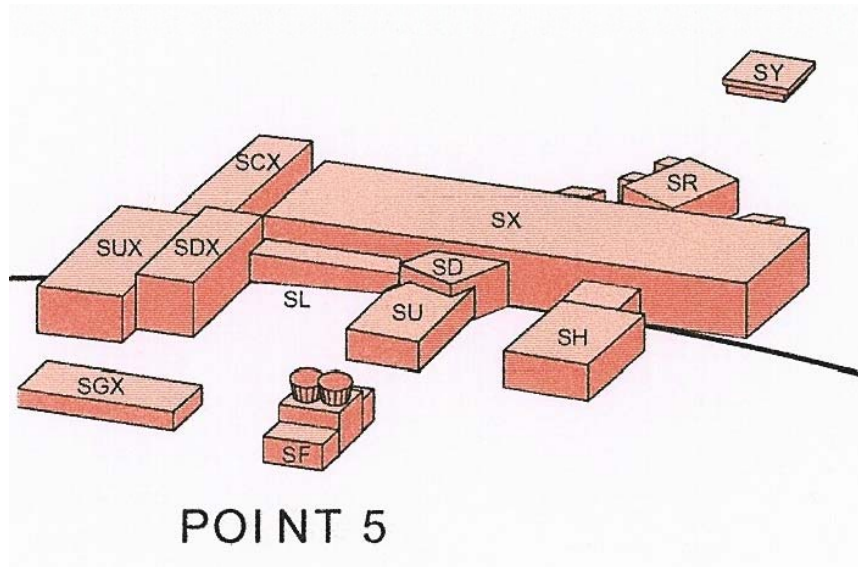


# P4 – SR4

POINT 4

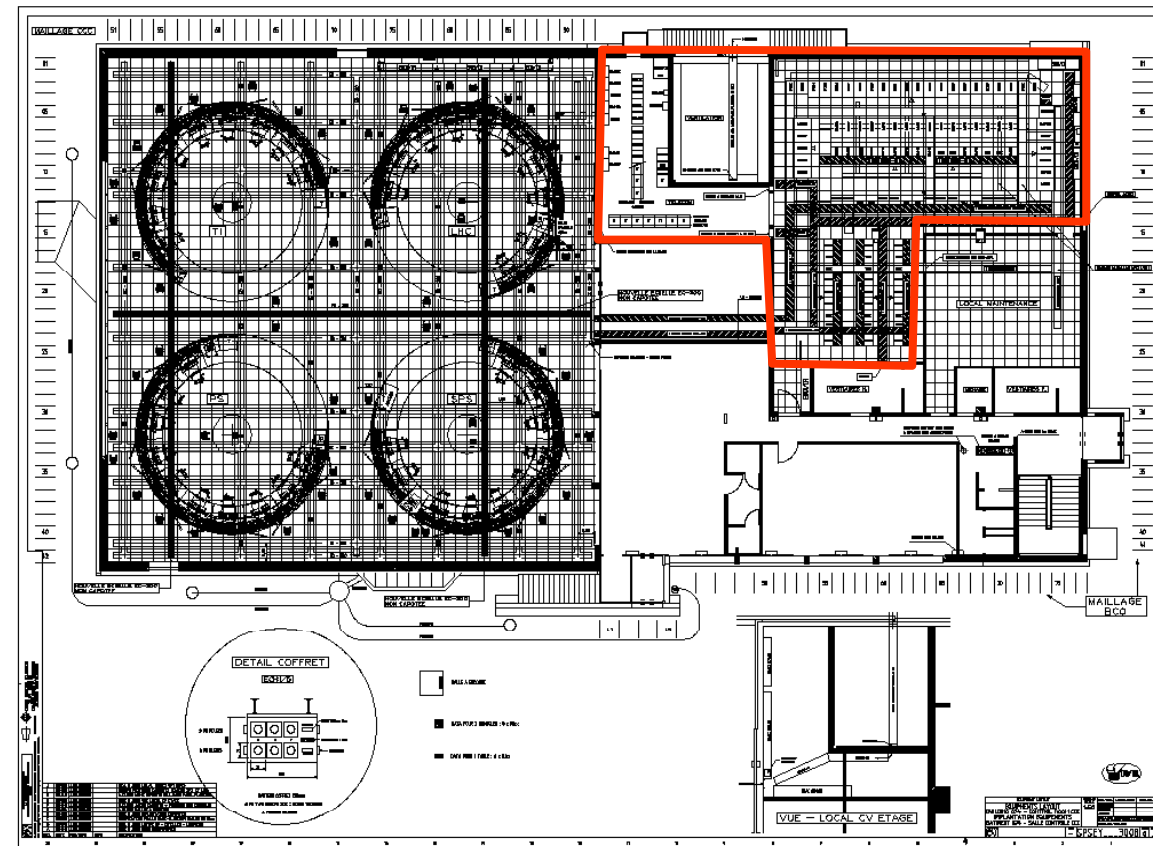


# P5 – SR5





# Prevessin – CCC



# Preveessin – CCR

