

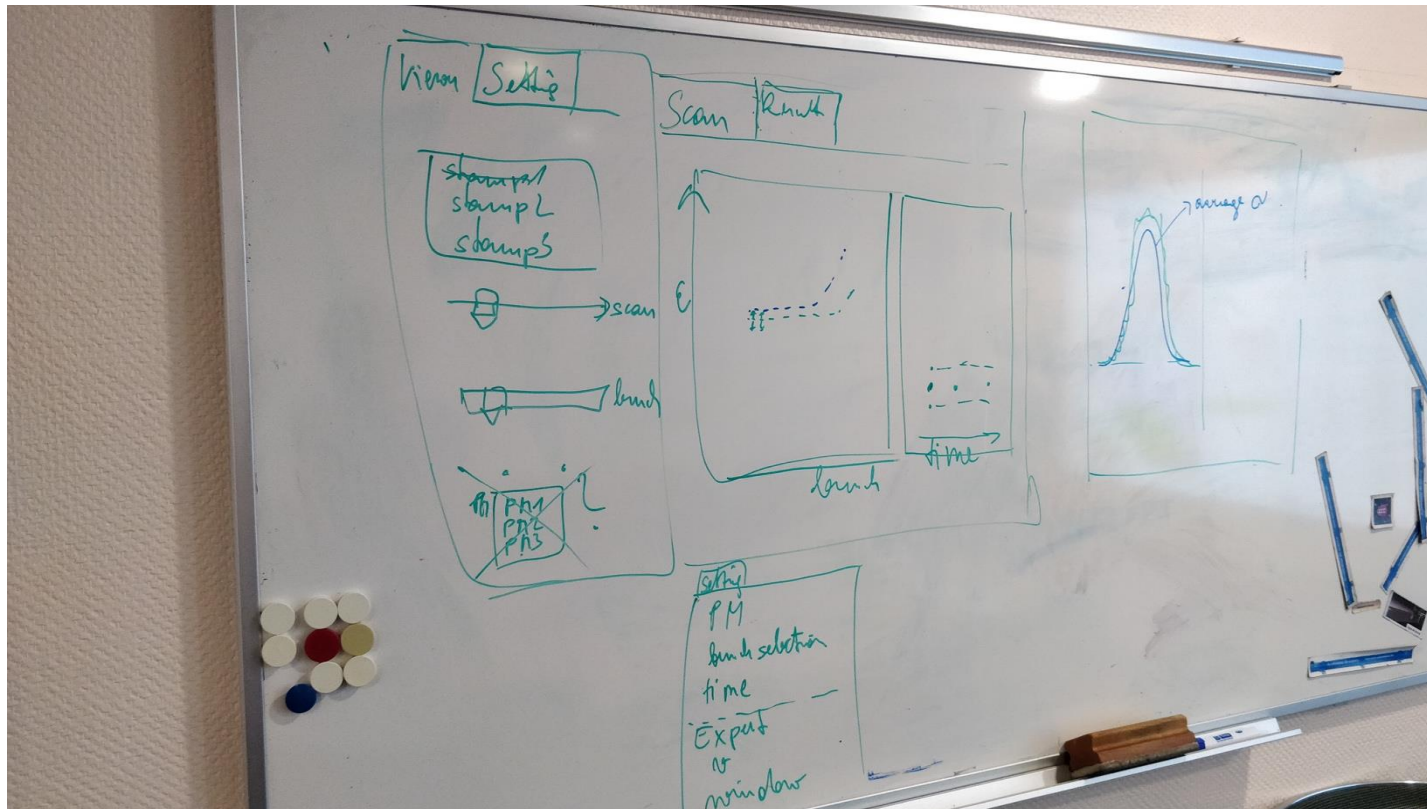
Synergies – wire scanner application

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Outcome of discussion on 30th of July, 2019

- Keep separate application for PSB – stays as is with new scanner
- Current idea: one GUI for SPS and PS
 - Settings panel will be different
 - LSA optics will be used SPS and PS
 - Can add various algorithms for analysis
 - Already using common fitting library
- Will decide finally as soon as first version of SPS wire scanner GUI ready
 - Need still input on how to deal with changing harmonic number in PS
 - → probably October this year

Outcome of discussion 30th of July, 2019



Outcome of discussion 30th of July, 2019

Window Title

Scan and settings Multi cycle Results/analysis

Device selection
BWS.51995.ROT_H

Emittances Summary Raw data

Cycle selector
SFTPRO2
LHCPILOT
LHC1

PM AUTO

Delays	IN	OUT
Scan	120	300
Scan	360	300
Scan	720	300

Bunch pattern
1-72,80-152

No of cycles

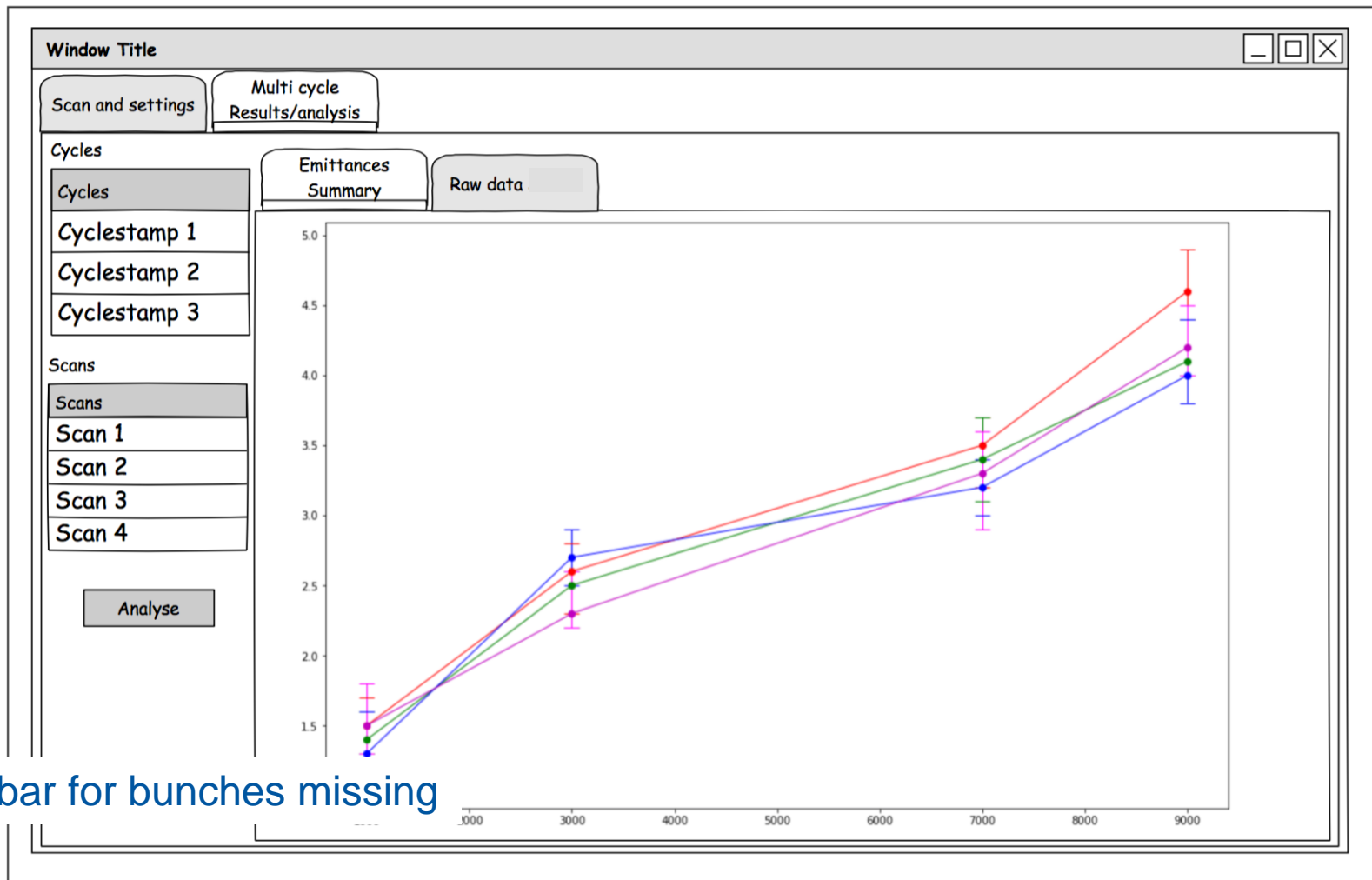
Scan

Cancel scan

Summary

Time (s)	Average emittances per scan
1000	1.5
3000	2.6
7000	3.5
9000	4.5

Outcome of discussion 30th of July, 2019



Scrollbar for bunches missing

Power converter interlock configuration – FEI

Synergies: SPS transfer lines, AWAKE, HiRadMat, LINAC4

Power converter interlock configuration tool - FEI

- Originally invented for the LHC transfer lines
 - Includes management through LSA and digitally signed settings (MCS)

L. Kolbeck

FGC Interlocks Application - SPS - DEMO

LHC_ION_12Inj_Q26_2018_V1 (LHC-IONS_ with 17.07 GeV)
SPS.USER.LHCION1

CURRENT ROLE : MCS-SPSOP

DRIVE LHC B1 DRIVE LHC B2

AWAKE LHC B1 LHC B2 HIRADMAT

L556-Bumpers-Septa/LHC TT60/LHC TT60-Bends/LHC TI2-Upstr TI2-Downstr/Bef-TED TI2-Downstr/Aft-TED

Crate name: cfv-ba6-rsps2
BIC input: CIB.BA6.TT60A/B

FEI output: 1 Output 1 pulse width: 19ms

PC Name	FEI Enabled		FEI Reference		FEI Tolerance		PC Value		FEI BIC Output		Max Value [A]	Required role	OP mode
	HW	LSA	HW [A]	LSA [A]	HW [A]	LSA [A]	Meas [A]	LSA [A]	HW	LSA			
BA6.RQID.610100	✓	✓	10	10	1	1	9.71	10	1	1	50	MCS-SPSOP-EXPERT	NORMAL
BA6.RQIF.610200	✓	✓	10	10	1	1	11.058	10	1	1	50	MCS-SPSOP-EXPERT	NORMAL
BA6.RQID.610300	✓	✓	10	10	1	1	8.627	10	1	1	50	MCS-SPSOP-EXPERT	NORMAL
BA6.RQIF.610400	✓	✓	10	10	1	1	10.276	10	1	1	50	MCS-SPSOP-EXPERT	NORMAL
BA6.RQID.610500	✓	✓	10	10	1	1	9.101	10	1	1	50	MCS-SPSOP-EXPERT	NORMAL
BA6.RQIF.610600	✓	✓	10	10	1	1	9.021	10	1	1	50	MCS-SPSOP-EXPERT	NORMAL
BA6.RBIH.610104	✓	✓	10	10	1	1	11.474	10	1	1	50	MCS-SPSOP	NORMAL
BA6.RBIH.610206	✓	✓	10	10	1	1	10.593	10	1	1	50	MCS-SPSOP	NORMAL
BA6.RBIV.610013	✓	✓	10	10	1	1	11.208	10	1	1	50	MCS-SPSOP	NORMAL
BA6.RBIV.610304	✓	✓	10	10	1	1	11.199	10	1	1	50	MCS-SPSOP	NORMAL

Copy from "PC Value/LSA" to "FEI Reference/LSA"

Toggle Trim Mode DRIVE LSA -> HW TRIM LSA -> HW CANCEL TRIM

09:03:33 - Trim mode changed from enabled to disabled, triggering data refresh

Power converter interlock configuration tool - FEI

L. Kolbeck

FGC Interlocks Application - LINAC4 - DEMO

PSB C Refresh

---ZERO--- (ZERO cycle)
PSB.USER.ZERO

CURRENT ROLE : MCS-SPSOP

DRIVE LINAC4

LINAC4

TEST_UNIT_NAME1 L4L.NFH L4L-QUADS L4T-DIPOLES LT.RBHZ

Crate name: CFC-400-RL4SRC
BIC input: UNKNOWN

PC Name	Channel	FEI Enabled		PC State	PC State Enabled		FEI Reference		FEI Tolerance		Ref. tolerance ...		PC Value		Max Value [V]	Required role	OP mode
		HW	LSA		HW	LSA	HW [V]	LSA [V]	HW [V]	LSA [V]	HW	LSA	Meas [V]	LSA [V]			
L4L.NFH.014	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CYCLING	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3.463	17	1.004	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2.221	17	30	MCS-LN4	SIMULATION
L4L.NFH.015	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CYCLING	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3.275	17	1.005	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2.521	17	30	MCS-LN4	SIMULATION
L4L.NFH.016	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CYCLING	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3.4	17	1.06	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2.32	17	30	MCS-LN4	SIMULATION

Toggle Trim Mode

DRIVE LSA → HW

TRIM LSA → HW

CANCEL TRIM

09:09:25 - Cycle changed to ...ZERO.... Refreshing FGCs data.