



MPP Meeting

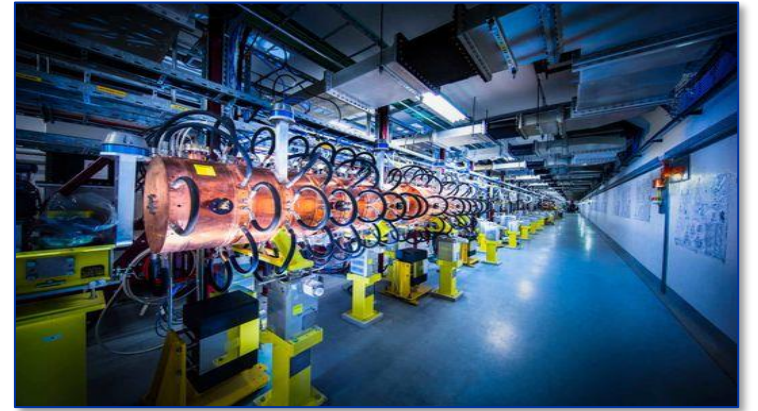
BLMINJ Commissioning Status

Mathieu Saccani, Digital Electronics, BE-BI-BL

Linac4 Commissioning Status

IST and Dry-run successful:

- ✓ Two special **BeamIn/BeamOut** timings signals validated
- ✓ Modulation test on all the **24 channels** done
- ✓ The **2 VME crates** now fully operational on LUMENS: reboot sequence tested
- ✓ Connections to BIC checked (**3 CIBU**)
- ✓ **Laser Alarms** from BLM to CCC deployed
- ✓ **SW Thresholds** properly interlocking according on the configuration (CIBU1/CIBU2)
- ✓ **HW Thresholds** tested randomly on several channels
- ✓ **NXCALS** logging tested

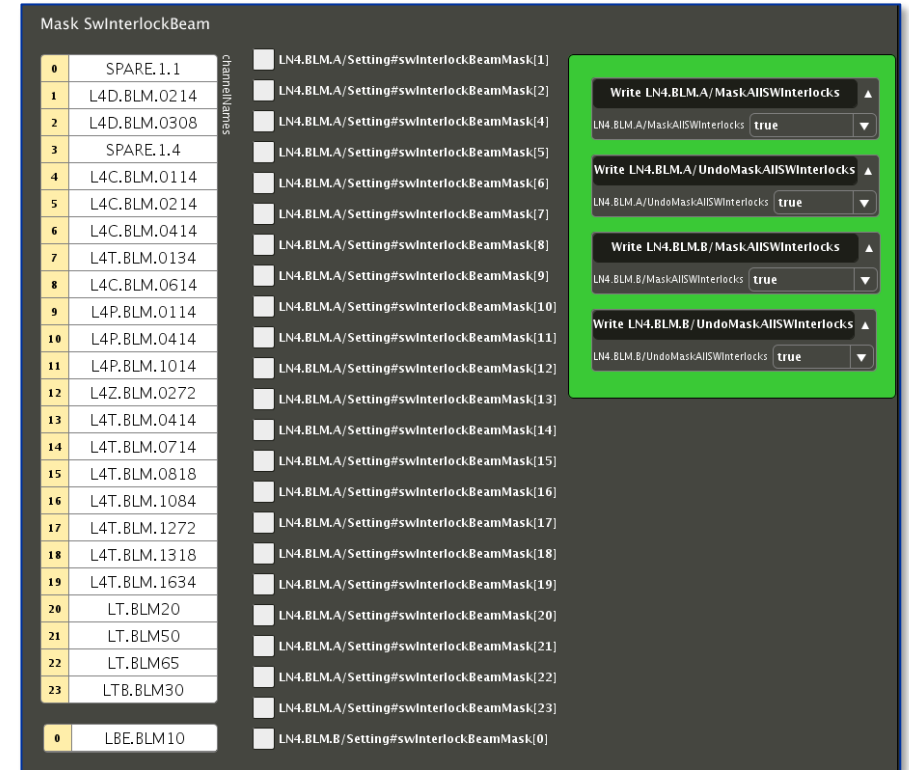


The Linac4 BLM system is now **fully operated** by OP.

LINAC 4 Vistar and BLM Masking



LINAC 4 Vistar during operation



BLM SW Interlock Masking

Courtesy: Yu Wu, BE-OP



BLM Setup with beam in Linac4



Tuning of SW Interlock Thresholds in LN4

LN4:BLM - PSB.USER.MD3 - (INCA)

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13 Oct 2020 20:32:57 PSB - 25 MD3 | 8C_L4Z_2020

JAPC view

LN4:BLM/1							
BLMINJ	Sw Interlock						
LN4.BLM.A	false						
LN4:BLM/2							
BLMINJ_Virtual	Loss Beam Presence	BLM Masked	BLM Thresholds	Sw Dump Status	Beam Presence		
L4D.BLM.0214	0.0000E00	false	1.00		false		
L4D.BLM.0308	1.3090E-01	false	3.00		false		
L4C.BLM.0114	2.4276E01	false	64.52		false		
L4C.BLM.0214	1.2257E00	false	4.00		false		
L4C.BLM.0414	8.8060E-01	false	3.00		false		
L4C.BLM.0614	1.6333E-01	false	3.00		false		
L4P.BLM.0114	2.1000E-01	false	2.00		false		
L4P.BLM.0414	3.8500E-01	true	2.00		false		
L4P.BLM.1014	8.1667E-02	false	2.00		false		
L4T.BLM.0134	0.0000E00	false	50.00		false		
L4Z.BLM.0272	0.0000E00	false	120.00		false		
L4T.BLM.0414	0.0000E00	false	100.00		false		
L4T.BLM.0714	0.0000E00	false	20.30		false		
L4T.BLM.0818	0.0000E00	false	3.30		false		
L4T.BLM.1084	0.0000E00	false	1.30		false		
L4T.BLM.1272	0.0000E00	false	50.00		false		
L4T.BLM.1318	0.0000E00	false	40.00		false		
L4T.BLM.1634	0.0000E00	false	2.00		false		
LN4:BLM/3							
BLMINJ_Virtual	Loss Beam Presence	BLM Masked	BLM Thresholds	Sw Dump Status	Beam Presence		
LT.BLM20	0.0000E00	false	25.00		false		
LT.BLM50	0.0000E00	false	25.00		false		
LT.BLM65	0.0000E00	false	15.00		false		
LT.BLM90	0.0000E00	false	30.00		false		
LN4:BLM/4							
LTIM	Event	Start	Delay	Clock Str.	AqnUTC	AqnC	AqnNano
BX.SBP-BLMLN4A	true	BX.SBP-CT	0	10MHz	1602613975	0	0
BX.EBP-BLMLN4A	false	BX.SBP-CT	0	1KHz	-	-	-
BX.SBIN-BLMLN4A	true	EXT1	0	10MHz	1602613975	274	274998300
BX.EBOUT-BLMLN4A	true	EXT2	6	10MHz	1602613975	275	275099400
BLM in LBE							
BLMINJ	Sw Interlock						
LN4.BLM.B	false						
LN4:BLM/6							
BLMINJ_Virtual	Loss Beam Presence	BLM Masked	BLM Thresholds	Sw Dump Status	Beam Presence		
LBE.BLM10	0.0000E00	false	25.00		false		
LN4:BLM/7							
LTIM	Event	Start	Delay	Clock Str.	AqnUTC	AqnC	AqnNano
BX.SBP-BLMLN4B	true	BX.SBP-CT	0	10MHz	1602613975	0	0
BX.EBP-BLMLN4B	true	BX.SBP-CT	0	1KHz	1602613975	0	0
BX.SBIN-BLMLN4B	true	EXT1	0	10MHz	1602613975	274	274998050
BX.EBOUT-BLMLN4B	true	EXT2	6	10MHz	1602613975	275	275099100

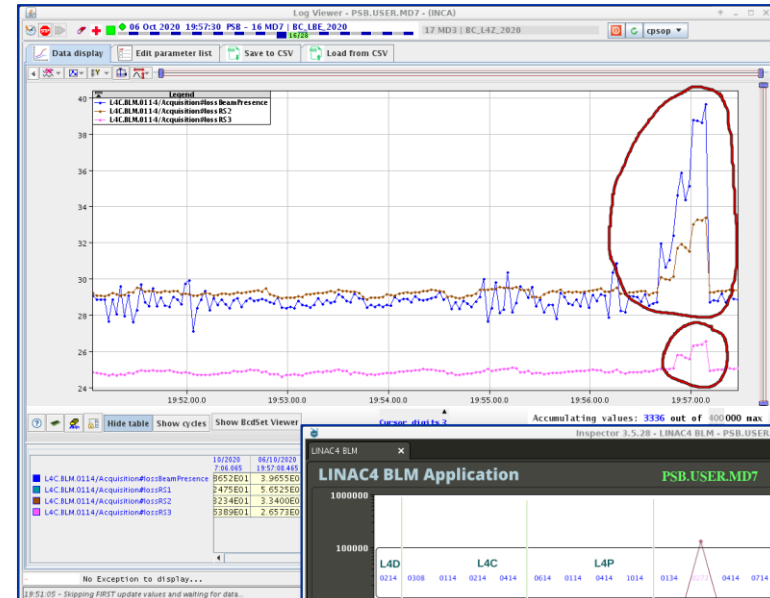
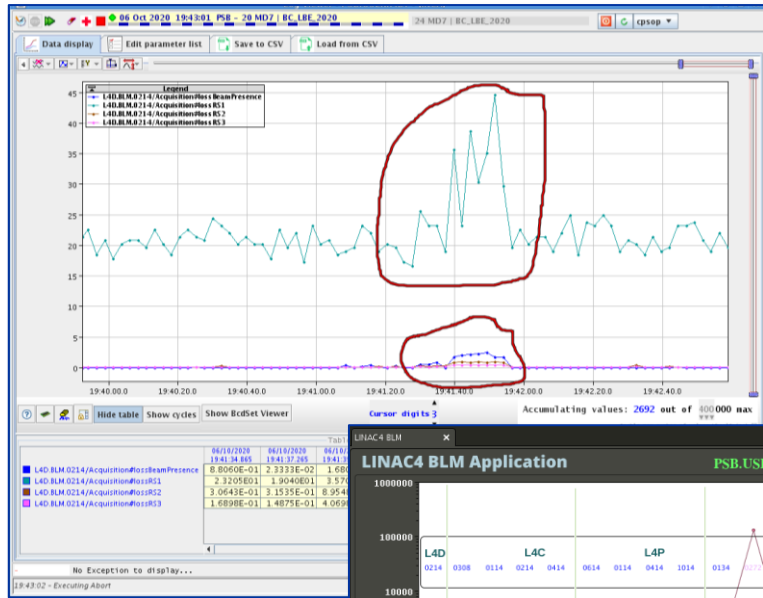
Sw Interlock Beam Presence Mask

No Exception to display...

Loss measurement, masks and thresholds in LN4

Courtesy: Yu Wu, BE-OP

BLM Test Sequence in Linac4



Test of channel L4D.BLM.0214 in LN4 2020-10-06



Test of channel L4D.BLM.0114 in LN4 2020-10-06

Courtesy: Yu Wu, BE-OP

PSB Commissioning Status



IST and Dry-run successful:

- ✓ Modulation test on all the **104 channels** done
- ✓ The **4 VME crates** now fully operational on LUMENS: reboot sequence tested
- ✓ PSB extraction split into **4 virtual instances**: BT, BTM, BTY, BTP
- ✓ Connections to BIC checked (**6 CIBU**)
- ✓ Laser Alarms from BLM to CCC deployed
- ✓ SW Thresholds properly interlocking the **Ring1/2 or Ring3/4** according to the configuration
- ✓ HW Thresholds tested randomly on several channels
- ✓ NXCALS logging tested

The PSB BLM system is commissioned and **ready to be used** by OP.

Commissioning Status of the Other Accelerators

PS Ring IST done:

- ✓ Modulation test on all the **100** PS channels done
- ✓ The **2 VME crates** now fully operational on LUMENS: reboot sequence tested
- ✓ **BLM SYNC concentrator** operational
- ✓ NXCALS logging tested



East area IST not started:

- On-going installation of **15** channels (4 already done)
- Modulation test to be done
- ✓ The **VME crate** now fully operational on LUMENS: reboot sequence tested

Commissioning Status of the Other Accelerators

TT2 IST done:

- ✓ Modulation test on all the **49** channels done
- ✓ The VME crate now fully operational on LUMENS: reboot sequence tested
- Noise peaks in the cables with HV distribution in SWY area ([Jira issue BIBML-1707](#))

TT10 IST done:

- ✓ Modulation test on all the **30** channels done
- ✓ The **2 VME crates** now fully operational on LUMENS: reboot sequence tested
- ✓ **TT10 Timing test mode** implemented to see data at BP rate instead of injection rate

