

# Booster HDW Commissioning - Feedback from W47

**MACHINE STATUS:** *3<sup>rd</sup>/5 weeks of the BOOSTER COLD-CHECKOUT - 1<sup>st</sup>/2 weeks Covers Consolidation (W47/48)*

Daily activity during the week:

- Hardware tests checklist follow-up (all the Straight-Sections and part of the Transfer lines are available for Tests);

**Monday 16/11:**

- BT3.QNO20** (A. Newborough - TE-MS) water leak found → Intervention planned in W48: already fixed on Thursday 19/11 (W47);
- Ring BLMs** (W. Vigano - BE-BI) warned us about that **All The Channels** must be tested again: consequence of the Magnet Covers Consolidation → 1h scheduled in early W49;
- 1.4\_GeV Cycles Momentum propagation to High-Level Parameters** (Operators + M.Hostettler) → Issue solved, some parameters were not correctly initialized

**Tuesday 17/11:**

- BTY.BVT101 Test** (ISOLDE in TEST-EIS mode) has been performed after its switching back to Safety Chain → Test successful;
- Dry-RUN: Fast-Interlock Application** – 1<sup>st</sup> test with New Version → reference settings must be added, and all the Power-Converters test will follow-up;
- Dry-Run: BTP quads Line** - Quadrupoles Optimizer and Pre-Magnetic cycle mechanism tests → BTP.QNO35 as sample, test successful waiting further magnetic measurement from TE-MS-MM;

**Wednesday 18/11:**

- Issue - APS-8481:** concerning BTY.QDE120 / BTY.QDE209 / BTY.QDE321 / BTY.QFO210 / BTY.QFO322 which should be PPM and stayed non-PPM → Solved;
- Issue - APS-8498:** BTY.BVT101 external condition: Wrong configuration in CCDE, EC was reading from FGC with wrong name → Test planned on Tuesday 24/11;

**Thursday 19/11:**

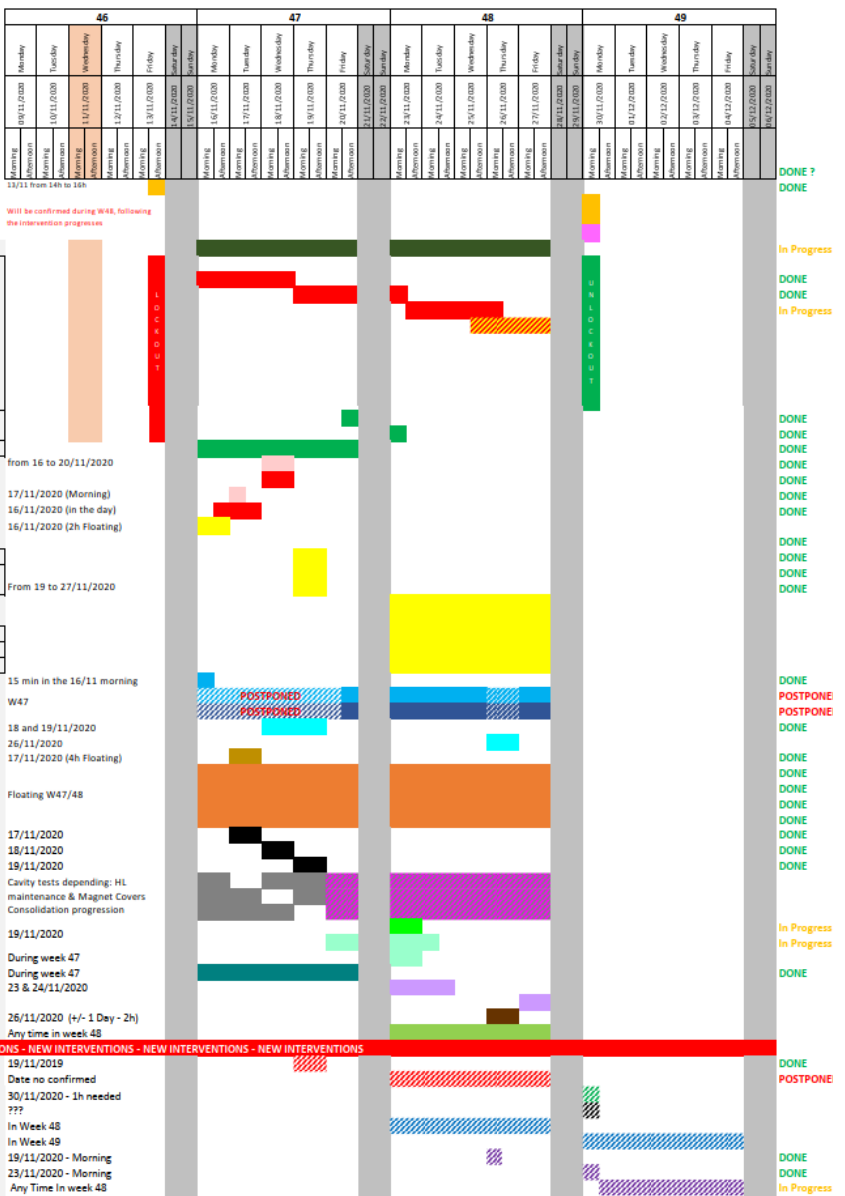
- BI.BCT10** (BE-BI) base line extremely perturbed by BI.DIS10 (other BCT's affected) → Investigation in progress, "Ferrites" around cables could be a solution;
- (Final) Dry-run on BCT:** watchdog, injection BCTs and Ejections BPM: → BI.BCTWD.BR watchdog, Extraction BPMs ok / L4T.BCTWD.BI as soon as new BCTTRIC and BCT watchdog FESA deployment;
- Issue (APS-8485):** missing OASIS signals for some magnet circuits in BT-BTM → Solved;

**Friday 20/11:**

- (Final) Dry-Run on injection Bumpers (Blr.BSW1L1.x)** after TE-EPC + BE-CO troubleshooting → Works as expected (confirmed by BE-OP commissioning);
- H0/H- Current Monitor:** test with BIS condition on Slave-BIC PSB1 → Test successful;
- Damage due to Covers Consolidation:** Vacuum Pump Feedthrough as been broken and Vacuum Sector BR20 vented to PA: Minor consequences;
  - RF HL tests (the vacuum level is not problematic with the FINEMET);
  - The new LIU-WireScanner repair and installation has been advanced to Monday 23/11 PM;

# Booster "Mini-ShutDown" (W47/48) Status

1	A.Akroh - F.Chapus	BE-OP	Machine Markings
2	BE-OP + M.Albert	BE-OP + EN-ACE	Machine final inspection and Closure
3	A.Akroh - F.Chapus	BE-OP	Shaft Closure
4	M.Marcandella	HSE-RP	
5	O.Cretiez	TE-MSC	Magnet Covers Consolidation (All Ring)
6	<b>Magnet Covers Lockout</b>		
7			Vacuum Pumps Batch1 → SS: 1/2/14/15/16
8	J.Somoza	TE-VSC	Vacuum Pumps Batch2 → SS:3/4/12/13
9			Vacuum Pumps Batch3 → SS:5/6/10/11/7
10			Vacuum Pumps Batch4 → SS:8/9 + Triangle
11	C.Behamonde	EN-SMM	BRr.LTS48L4 - Beam Scrapers
12	Ch.Zamantzas	BE-BI	BLMs IC and FIC
13	A.Newborough	TE-MSC + TE-EPC	Main Circuits - BR.BHZ/QFO/QDE
14	A.Newborough	TE-MSC + TE-EPC	Ring Auxiliary Circuits - Qstrip / BDL / Orbit Correctors and Multipoles
15	G.kozian	BE-RF	BRr.DES3L1 - Transverse FeedBack
16	L.M.Colarajo	TE-ABT	Blr.KSW - Injection Kickers - Only W47
17	A.Newborough	TE-MSC + TE-ABT	BRr.BSW - Extraction Bumpers - Only W47
18	A.Newborough	TE-MSC	BTM.QNO05 replacement → Lockout: BTM.QNO05, BTM.BH210, BTM.QNO10, BT.BH210
19	P.Valentin	EN-SMM	BTM Survey
20	BTM Magnet Lockout		
21	P.Valentin	EN-SMM	BI survey: BI.BVT.10, BI.MQN.50, BI.MQN.60 (4 niveaux), BI.BPM.40, BI.BTV.40, BI.BPM.50.
22	BI Magnet Lockout		
23	Th.Chervet	EN-EL	Preparatory Visit
24			Equipment grounding
25			BTY.SPT103 → Lockout: 8TY.BVT101, 8TY.QDE104, 8TY.QFO108, 8TY.QDE113
26			BTP.STP05
27			BTP.STP10 → Lockout: 8T.BH210, 8TM.BH210, 8TM.BLM10
28			Potence IT.
29			Monorail KKB
30			BRr.LTS48L4 → Lockout: same that Magnet Covers: BR.QFO and BR.QDE
31			BRr.BSW4L1 → Lockout: BRr.DHZ/DVT4L1, BRr.ONO/XNO/XSK/OSK4L1
32			BRr.BSW1L1 → Lockout: BRr.DHZ/DVT1L1, BRr.ONO/XNO/QNO1L1
33	G.Petrika	EN-CV	Cooling Station Software update
34	G.Petrika	EN-CV	BAT cooling coil Change Postponed to W48 - coil not delivered at CERN only 20/11/2020
35	G.Petrika	EN-CV	No Air Cooling in surface building Postponed to W48 - coil not delivered at CERN only 20/11/2021
36	E.Cano	EN-EL	Emergency Exit - Crinoline - Normal Lighting
37			Emergency Exit - Crinoline - Emergency Lighting
38	L.Borskiewicz	IT-CS	Ethernet Cable for BE-BI
39	G.Georgiev	EN-EL	TE-EPC - Timing Cables for Injection (Qstrip)
40			TE-EPC - Ethernet QCD3 / QCD14
41			TE-EPC - POP5b/BIS Interlock
42			BE-RF - FINEMET/BIS Interlock
43	M.Haase	BE-RF (HL)	Maintenance Cavity SS_13
44			Maintenance Cavity SS_7
45			Maintenance Cavity SS_5
46	M.E.Angoletta and LL-RF Team	BE-RF (LL)	Cavity SS_13 - Potentially Available for LL_RF Test
47			Cavity SS_7 - Potentially Available for LL_RF Test
48			Cavity SS_5 - Potentially Available for LL_RF Test
49	W.Andreasz	BE-BI	BWS WireScanner change in 4L1
50	J.Somoza	TE-VSC	BR20 Sector Venting (from SS_2 to SS_B)
51	J.Somoza	TE-VSC	Feedthrough Repair - In BR20
52	J.Somoza	TE-VSC	Leak Detection in BH211/151/162
53	S.Burger	BE-BI	Electrical Socket Change in BTV - Surface Rack
54	S.Burger	BE-BI	BRr.BTV10 - Camera Adjustment
55	M.Marcandella	HSE-RP	Survey Booster Ring and Transfer Lines
56	L.M.Colarajo	TE-ABT	OASIS signal BT2.KFA20 inverted
57	<b>NEW INTERVENTIONS - NEW INTERVENTIONS - NEW INTERVENTIONS - NEW INTERVENTIONS - NEW INTERVENTIONS - NEW INTERVENTIONS - NEW INTERVENTIONS</b>		
58	A.Newborough	TE-MSC	BT3.QNO20 - Water leak on cooling circuit - found Monday 16/11
59	O.Cretiez	TE-MSC	Magnet Covers consolidation for the Triangle - If produced in time
60	W.Vigano	BE-BI	Test of the BLM channels
61	CCC - Operation	BE-OP	WIC Channels Of the PSB Rings to re-check (all or partially???)
62	L.de Mallec	TE-EPC	Qstrip HWD modifications
63	CCC - Operation	BE-OP	Validation HDW Modifications
64			Blr.BCT10 noise - shielding Check
65	R.Ruffieux	BE-BI	Blr.BCT10 noise - Visit with G.Georgiev (EN-EL)
66			Blr.BCT10 noise - Test with CCC



## Main Activities Status:

- Magnet Covers Consolidation (TE-MSC):
  - In Progress more than 50% done;
  - We are in time (no delay expected yet);
  - Covers Consolidation in the Outer region of the Triangle: Postponed (next Technical Stop, YETS,...)
- BTM.QNO05 (TE-MSC) replacement → Done;
- BT3.QNO20 (TE-MSC) water leak → Repaired;
- Vacuum Sector BR20 (TE-VSC) – Pump Feedthrough repair
  - In Progress (to be finished today);
- BR.BWS4L1 (BE-BI) 1 WireScanner to change → Done;

## Delayed Activities /waiting Confirmation:

- BAT Cooling Coil (EN-CV) change → Postponed to W48 if coil delivered in time;

General Status: In time,

No expected delay before the end of the intervention period and the return to full ColdCheckout, next week (W49).



# Booster HDW Commissioning - W49

**MACHINE STATUS:** *The machine is electrically unlocked and generally in BEAM Mode to allow beam from Linac4 to LBE.*

**No more access allowed in the machine except for Corrective Maintenance.**

## All the Week:

- Booster in COLDCHECKOUT all the machine running;
- Dry-Runs Finalisation and Interlock Systems Tests.

## Monday 30/11 :

- Morning - Machine Final Inspection by BE-OP and HSE-RP to prepare the BEAM Operation → to be confirmed and discuss with L4-Team;
- System to be re-checked consequently to the Magnet Covers Consolidation:
  - Ring BLM channels (BE-BI);
  - WIC channels (TE-MPE + BE-OP);

Fell free to join the **Daily ZOOM Chat-Room at 9:00** (L4-PSB-OP-DESK: <https://be-dep-op.web.cern.ch/en/content/op-desk-zoom-rooms>).