ITSU – LNF: Internal Organization Proposal

Paula Matuoka - paula.matuoka@lnf.infn.it

Motivation

- * Optimization of the shift schedule.
- * Keep track of the production steps.
- * Access control of the clean/grey rooms.
- * Identify the time constraints.
- * Need for filling in the Production Database forms and reports.

Building Shifts



1. Crew Identification

Every person allowed to the Clean/Grey rooms will be identified by:

- * Two letters ID.
- * Supervisor: Y/N.
- * Available: Y/N.
- * Main activity class.
- * Activities allowed.

Example: Paula Matuoka ID: PM **Supervisor: Yes Available: Yes** Main activity class: Data Analysis Activities allowed: Reception Test, Fast Power Test, Tab-A cutting.

2. Workstations

8 identified workstations:

CMM-TABLE	GLUE-ST
CMM Table	Gluing Station
TAB-CUT-TABLE	BOND-CK-ST
Tab-Cutting Table	Bond-Check Station
SOLD-ST-CR Soldering Station in the Clean Room (HS)	TEST-ST-CR Testing Station in the Clean Room (HIC & HS)
SOLD-ST-GA Soldering Station in the Grey Area for Staves	TEST-ST-GA Testing Station in the Grey Area for Staves

* Space constraints between soldering and test stations.



Places to store components, supplies and data.

HIC-RACK HIC Storage Rack

SUP-CABINET-V Supplies Cabinet in Vestibule S-RACK Stave Storage Rack

SUP-CABINET-GA Supply Cabinet in Grey Area

TOOLBOX Tool box with wheels **CERNBOX** Shared folder with data

4. Components

Components of the Stave (serial number).

OB-HIC	OL-CP	OL-SF
HIC modules	Cold-Plate	Space-Frame
OL-BB	OB-FPC-EXT-D	OB-FPC-EXT-U
Bias Bus	FPC extension	FPC extension
OL-PB	OL-HS-L	OL-HS-U
Power Bus	Half-Stave	Half-Stave
OL-PB-B	OL-FB-L	OL-FB-U
Power Bus Blank	Filter Board	Filter board
OL-S-NO-PB-BB Stave without PB	OL-S Stave	



No serial number nor exact quantity required.

*GLUE	FGLUE
Araldite 2011	Fast glue
U-ARMS	CAP
U-arms	Capacitors for Power Bus
BRIDGES	WELD
Bridges for interconnections	Weld - Tin
TBOX Transport Box for Stave	

* GLUE: picture of the tube, batch number, expiry date and opening day required.

Activities are the ones required for the Stave construction.

They are the ones that have to be reported on the Production Database.

Extra-activities are a preparation or a complement to an activity. GPREP - Glue Preparation MARKER-MEAS - Markers Measurement BOND-CK - Bond check of the OB HIC CAP-ON-PB-B - Soldering Capacitors to Power Bus Blank

25 Activities

- 1. ML-OL-COMP-REC_CP: cold-plate reception
- 2. ML-OL-COMP-REC_SF: space-frame reception
- 3. ML-OL-EL-COMP-REC_BB: bias-bus reception
- 4. ML-OL-EL-COMP-REC_FB-L: filter-board reception
- 5. ML-OL-EL-COMP-REC_FB-U: filter-board reception
- 6. ML-OL-EL-COMP-REC_PB: power-bus reception
- 7. OB-HIC-FPT: HIC fast power test
- 8. OB-HIC-REC: HIC reception test
- 9. OB-HIC-TAB-CUT_A: tab_A cutting
- 10. OB-HIC-TAB-CUT_B: tab_B cutting
- 11. OL-CP-PL: cold-plate planarity measurement
- 12. OL-HS-L_AS: half-stave assembly
- **13. OL-HS-QT_L:** half-stave qualification test

- **14. OL-HS-QT_U:** qualification test
- **15. OL-HS-SOLD-DESOLD:** soldering bridges and FPC extensions, remove resistors
- 16. OL-HS-U_AS: half-stave assembly
- 17. OL-PB-BB-FB-SOLD: soldering PB, BB and FB
- 18. OL-PBBB-FOLD-S: PB folding procedure
- 19. OL-PBBB-SOLD-S_L: soldering PB to stave
- 20. OL-PBBB-SOLD-S_U: soldering PB to stave
- 21. OL-S-F-METRO: stave final metrology
- 22. OL-S-NO-PB-AS_L: stave assembly (no PB)
- 23. OL-S-NO-PB-AS_U: stave assembly (no PB)
- **24. OL-S-STORE-SHIP:** put stave in transport box and ship it to Cern
- **25. U-ARMS-ON-OL-HS:** gluing u-arms to half-stave

7. Activity Classes

10 identified activity classes:

ASY	CMM
Assembly	CMM Operation
TRA	TRB
Training A (TAB_A cut)	Training B (TAB_B cut)
SLD	VIS
Soldering	Visual Inspection
DAT	DTH
Data Analysis	Data Handling
TEC	OBS
Technician	Observer

This is important for training and shift swaps.

8. Shifts and Tasks

Activities:

- * Class
- * Average time
- * Required components
- * Required supplies
- * Required extra-activities
- * Workstation

Tasks:

- * Activities
- * Number of workers (up to 3)
- * Ordering and time constraints

Shift:

- * 39 tasks to finish one Stave.
- * 100 activities.
- * ~96 working hours.

Full Production (~26 Staves):

- * 3 Staves at the same time.
- * 1 Stave ready per week.
- * At least 7 months to complete.

Tasks required to build 1 Stave - Preparation

	Stave Production – All Tasks												
т	Α	ACTIVITY	ACTV_TIME	REQ.COMP	REQ.SUP	WORKSTATION	REQ.EXTRA_ ACTV	cla	ISS	TOTAL			
	1	OB-HIC-REC	20	OB-HIC_AR_1	0	TEST-ST-CR	0	DAT	P1				
1	2	OB-HIC-TAB-CUT_A	25	OB-HIC_AR_1	0	TAB-CUT-TABLE	BOND-CK	TRA	D2	65			
-	3	BOND-CK	10	OB-HIC_AR_1	0	BOND-CK-ST	0	VIS	F2	05			
	4	OB-HIC-FPT	10	OB-HIC_AR_1	0	TEST-ST-CR	0	DAT	P1				
	5	OB-HIC-REC	20	OB-HIC_AR_2	0	TEST-ST-CR	0	DAT	P1				
2	6	OB-HIC-TAB-CUT_A	25	OB-HIC_AR_2	0	TAB-CUT-TABLE	BOND-CK	TRA	D2	65			
2	7	BOND-CK	10	OB-HIC_AR_2	0	BOND-CK-ST	0	VIS	F2	05			
	8	OB-HIC-FPT	10	OB-HIC_AR_2	0	TEST-ST-CR	0	DAT	P1				
	9	OB-HIC-REC	20	OB-HIC_AR_3	0	TEST-ST-CR	0	DAT	P1				
	10	OB-HIC-TAB-CUT_A	25	OB-HIC_AR_3	0	TAB-CUT-TABLE	BOND-CK	TRA	D2	CE.			
3	11	BOND-CK	10	OB-HIC_AR_3	0	BOND-CK-ST	0	VIS	P2	60			
	12	OB-HIC-FPT	10	OB-HIC_AR_3	0	TEST-ST-CR	0	DAT	P1	1			
	13	OB-HIC-REC	20	OB-HIC_AR_3	0	TEST-ST-CR	0	DAT	P1				
	14	OB-HIC-TAB-CUT_A	25	OB-HIC_AR_4	0	TAB-CUT-TABLE	BOND-CK	TRA	D2	CE.			
4	15	BOND-CK	10	OB-HIC_AR_4	0	BOND-CK-ST	0	VIS	P2	60			
	16	OB-HIC-FPT	10	OB-HIC_AR_4	0	TEST-ST-CR	0	DAT	P1	1			
	17	OB-HIC-REC	20	OB-HIC_AR_5	0	TEST-ST-CR	0	DAT	P1				
-	18	OB-HIC-TAB-CUT_A	25	OB-HIC_AR_5	0	TAB-CUT-TABLE	BOND-CK	TRA	D 2	CE.			
э	19	BOND-CK	10	OB-HIC_AR_5	0	BOND-CK-ST	0	VIS	P2	60			
	20	OB-HIC-FPT	10	OB-HIC_AR_5	0	TEST-ST-CR	0	DAT	P1	1			
	21	OB-HIC-REC	20	OB-HIC_AR_6	0	TEST-ST-CR	0	DAT	P1				
6	22	OB-HIC-TAB-CUT_A	25	OB-HIC_AR_6	0	TAB-CUT-TABLE	BOND-CK	TRA	D2	CE.			
0	23	BOND-CK	10	OB-HIC_AR_6	0	BOND-CK-ST	0	VIS	P2	60			
	24	OB-HIC-FPT	10	OB-HIC_AR_6	0	TEST-ST-CR	0	DAT	P1	1			
	25	OB-HIC-REC	20	OB-HIC_BR	0	TEST-ST-CR	0	DAT					
7	26	OB-HIC-TAB-CUT_B	25	OB-HIC_BR	0	TAB-CUT-TABLE	BOND-CK	TRB	D1	6E			
'	27	BOND-CK	10	OB-HIC_BR	0	BOND-CK-ST	0	VIS	PI	co			
	28	OB-HIC-FPT	10	OB-HIC_BR	0	TEST-ST-CR	0	DAT					

Tasks required to build 1 Stave - Preparation

	Stave Production – All Tasks												
т	Α	ACTIVITY	ACTV_TIME	REQ.COMP	REQ.SUP	WORKSTATION	REQ.EXTRA_ ACTV	cla	ass	TOTAL			
	29	OB-HIC-REC	20	OB-HIC-AL_1	0	TEST-ST-CR	0	DAT	P1				
	30	OB-HIC-TAB-CUT_A	25	OB-HIC-AL_1	0	TAB-CUT-TABLE	BOND-CK	TRA	D2	CE.			
0	31	BOND-CK	10	OB-HIC-AL_1	0	BOND-CK-ST	0	VIS	F2	65			
	32	OB-HIC-FPT	10	OB-HIC-AL_1	0	TEST-ST-CR	0	DAT	P1	1			
	33	OB-HIC-REC	20	OB-HIC-AL_2	0	TEST-ST-CR	0	DAT	P1				
0	34	OB-HIC-TAB-CUT_A	25	OB-HIC-AL_2	0	TAB-CUT-TABLE	BOND-CK	TRA	D2	65			
	35	BOND-CK	10	OB-HIC-AL_2	0	BOND-CK-ST	0	VIS	F2	05			
	36	OB-HIC-FPT	10	OB-HIC-AL_2	0	TEST-ST-CR	0	DAT	P1]			
	37	OB-HIC-REC	20	OB-HIC-AL_3	0	TEST-ST-CR	0	DAT	P1				
10	38	OB-HIC-TAB-CUT_A	25	OB-HIC-AL_3	0	TAB-CUT-TABLE	BOND-CK	TRA	D2	CE.			
10	39	BOND-CK	10	OB-HIC-AL_3	0	BOND-CK-ST	0	VIS	F2	00			
	40	OB-HIC-FPT	10	OB-HIC-AL_3	0	TEST-ST-CR	0	DAT	P1				
	41	OB-HIC-REC	20	OB-HIC-AL_4	0	TEST-ST-CR	0	DAT	P1				
11	42	OB-HIC-TAB-CUT_A	25	OB-HIC-AL_4	0	TAB-CUT-TABLE	BOND-CK	TRA	D2	65			
	43	BOND-CK	10	OB-HIC-AL_4	0	BOND-CK-ST	0	VIS	F2	05			
	44	OB-HIC-FPT	10	OB-HIC-AL_4	0	TEST-ST-CR	0	DAT	P1]			
	45	OB-HIC-REC	20	OB-HIC-AL_5	0	TEST-ST-CR	0	DAT	P1				
12	46	OB-HIC-TAB-CUT_A	25	OB-HIC-AL_5	0	TAB-CUT-TABLE	BOND-CK	TRA	D2	65			
12	47	BOND-CK	10	OB-HIC-AL_5	0	BOND-CK-ST	0	VIS	F2	05			
	48	OB-HIC-FPT	10	OB-HIC-AL_5	0	TEST-ST-CR	0	DAT	P1	1			
	49	OB-HIC-REC	20	OB-HIC-AL_6	0	TEST-ST-CR	0	DAT	P1				
12	50	OB-HIC-TAB-CUT_A	25	OB-HIC-AL_6	0	TAB-CUT-TABLE	BOND-CK	TRA	D2	65			
10	51	BOND-CK	10	OB-HIC-AL_6	0	BOND-CK-ST	0	VIS	12	05			
	52	OB-HIC-FPT	10	OB-HIC-AL_6	0	TEST-ST-CR	0	DAT	P1				
	53	OB-HIC-REC	20	OB-HIC-BL	0	TEST-ST-CR	0	DAT					
14	54	OB-HIC-TAB-CUT_B	25	OB-HIC_BL	0	TAB-CUT-TABLE	BOND-CK	TRB	D1	65			
14	55	BOND-CK	10	OB-HIC-BL	0	BOND-CK-ST	0	VIS	Γĭ	05			
	56	OB-HIC-FPT	10	OB-HIC_BL	0	TEST-ST-CR	0	DAT					
15	57	ML-OL-EL-COMP-REC_PB-B	5	OL-PB-B_U	0	SOLD-ST-GA	0	VIS	D1	85			
15	58	CAP-ON-PB-B	80	OL-PB-B_U	CAP	SOLD-ST-GA	0	SLD	LT.	05			
16	59	ML-OL-EL-COMP-REC_PB-B	5	OL-PB-B_L	0	SOLD-ST-GA	0	VIS	P1	85			
10	60	CAP-ON-PB-B	80	OL-PB-B_L	CAP	SOLD-ST-GA	0	SLD	11	05			

Tasks required to build 1 Stave - Assembly

			Stave P	roduction – All Tasks	;				shifts	1
т	Α	ACTIVITY	ACTV_TIME	REQ.COMP	REQ.SUP	WORKSTATION	REQ.EXTRA_ ACTV	cla	ass	TOTAL
	61	ML-OL-COMP-REC_CP	5	OL-CP_U	0	CMM-TABLE	0	VIS		
17	62	BASE-CK	30	OL-CP_U	0	CMM-TABLE	0	CMM	P1	135
	63	OL-CP-PL	100	OL-CP_U	0	CMM-TABLE	BASE-CK	CMM		
	64	GPREP	60	GLUE	0	GLUE-ST	0	ASY	P1	
18	65	OL-HS-U_AS	240	OB-HIC_AR_1 OB-HIC_AR_2 OB- HIC_AR_3 OB-HIC_AR_4 OB- HIC_AR_5 OB-HIC_AR_6 OB- HIC_BR OL-CP_U OB-FPC-EXT- U	GLUE	CMM-TABLE	BASE-CK GPREP GPREP MARKER- MEAS	ASY/C MM	P2/P3	360
	66	GPREP	60	GLUE	0	GLUE-ST	0	ASY	P1	
19	67	MARKER-MEAS	150	OL-HS-U	0	CMM-TABLE		CMM	P1	150
20	68	OL-HS-SOLD-DESOLD	480	OL-HS-U	WELD BRIDGES	SOLD-ST-CR	0	SLD	P2/P2	480
21	69	U-ARMS-ON-OL-HS	60	OL-HS-U	U-ARMS FGLUE	SOLD-ST-CR	0	ASY	P1	60
22	70	OL-HS-QT_U	150	OL-HS-U	0	TEST-ST-CR	0	DAT	P1	150
	71	ML-OL-COMP-REC_CP	5	OL-CP_L	0	CMM-TABLE	0	VIS		
23	72	BASE-CK	30	OL-CP_L	0	CMM-TABLE	0	CMM	P1	95
	73	OL-CP-PL	60	OL-CP_L	0	CMM-TABLE	BASE-CK	CMM]	
	74	GPREP	60	GLUE	0	GLUE-ST	0	ASY	P1	
24	75	OL-HS-L_AS	240	OB-HIC_AL_1 OB-HIC_AL_2 OB- HIC_AL_3 OB-HIC_AL_4 OB- HIC_AL_5 OB-HIC_AL_6 OB- HIC_BL OL-CP_L OB-FPC-EXT-D	GLUE	CMM-TABLE	BASE-CK GPREP GPREP MARKER- MEAS	ASY/C MM	P2/P3	360
76 GPREP 60		GLUE	0	GLUE-ST	0	ASY	P1	1		
25	77	MARKER-MEAS	150	OL-HS-L	0	CMM-TABLE		CMM	P1	150

Tasks required to build 1 Stave – Assembly

Stave Production – All Tasks													
т	Α	ACTIVITY	ACTV_TIME	REQ.COMP	REQ.SUP	WORKSTATION	REQ.EXTRA_ ACTV	c	ass	TOTAL			
26	78	OL-HS-SOLD-DESOLD	480	OL-HS-L	WELD BRIDGES	SOLD-ST-CR	0	SLD	P1/P2	480			
27	79	U-ARMS-ON-OL-HS	60	OL-HS-L	U-ARMS FGLUE	SOLD-ST-CR	0	ASY	P1	60			
28	80	OL-HS-QT_L	150	OL-HS-L	0	TEST-ST-CR	0	DAT	P1	150			
	81	ML-OL-COMP-REC_SF	5	OL-SF	0	CMM-TABLE	0	VIS	P1				
	82	MARKER-MEAS	150	OL-HS-U	0	CMM-TABLE	0	CMM	P1	1			
29	83	OL-S-NO-PB-AS_U	150	OL-SF OL-HS-U	GLUE	CMM-TABLE	MARKER- MEAS GLUE	ASY	P1/P2	365			
	84	GPREP	60	GLUE	0	GLUE-ST	0	ASY	P2]			
	85	MARKER-MEAS	150	OL-HS-L	0	CMM-TABLE	0	CMM	P1				
30	86	OL-S-NO-PB-AS_L	150	OL-SF OL-HS-L	GLUE	CMM-TABLE	MARKER- MEAS GLUE	ASY	P1/P2	360			
	87	GPREP	60	GLUE	0	GLUE-ST	0	ASY	P1				
	88	ML-OL-EL-COMP-REC_BB	5	OL-BB_U	0	SOLD-ST-GA	0	VIS					
21	89	ML-OL-EL-COMP-REC_FB-U	5	OL-FB-U	0	SOLD-ST-GA	0	VIS	D1	120			
31	90	OL-PB-BB-FB-SOLD	120	OL-PB OL-BB OL-FB-U	WELD	SOLD-ST-GA	CAP-ON-PB-B	SLD		130			
	91	ML-OL-EL-COMP-REC_BB	5	OL-BB_L	0	SOLD-ST-GA	0	VIS					
32	92	ML-OL-EL-COMP-REC_FB-L	5	OL-FB-L	0	SOLD-ST-GA	0	VIS	D1	120			
32	93	OL-PB-BB-FB-SOLD	120	OL-PB OL-BB OL-FB-U	WELD	SOLD-ST-GA	CAP-ON-PB-B	SLD		130			

Tasks required to build 1 Stave – Final Stage

	Stave Production – All Tasks											
т	Α	ACTIVITY	ACTV_TIME	REQ.COMP	REQ.SUP	WORKSTATION	REQ.EXTRA_ ACTV	cla	ass	TOTAL		
33	94	OL-S-F-METRO	180	OL-S-NO-PB-BB	0	CMM-TABLE	0	CMM	P1	180		
34	95	OL-PBBB-SOLD-S_U	240	OL-PB OL-BB OL-FB-U OL-S-NO- PB-BB	WELD	SOLD-ST-GA	0	SLD	P1	240		
35	96	OL-PBBB-SOLD-S_L	240	OL-PB OL-BB OL-FB-L OL-S-NO- PB-BB	WELD	SOLD-ST-GA	0	SLD	P1	240		
36	97	OL-PBBB-FOLD-S	30	OL-S	0	SOLD-ST-GA	0	ASY	P1	30		
37	98	OL-HS-QT_U	150	OL-S	0	TEST-ST-GA	0	DAT	P1	150		
38	99	OL-HS-QT_L	150	OL-S	0	TEST-ST-GA	0	DAT	P1	150		
39	100	OL-S-STORE-SHIP	60	OL-S	TBOX	GA	0	DTH	P1	60		

Stave Stave	N-1 N N-+1					CR			CR							
Stare				CMM-TABLE	GLUE-ST	TAB-CUT-TABLE	BOND-CK-ST	TEST-ST-CR	SOLD-ST-CR	SOLD-ST-GA	TEST-ST-GA					
MON	07:00	-	08:00													
	08:00		09:00	33 – 180 min P1 [Stave final metrology]												
	09:00		10:00													
	10:00		11:00	17 - 135 min P1 (CP												
	11:00	_	12:00	planarity]												
	12:00	_	13:00							34 - 240 min (+60 min lunch) P1 [sold PB to Stave]						
	13:00	1	14:00													
	14:00	_	15:00													
	15:00	_	16:00	18 - 360 min (+60mi P2 P3 [HS-U as	in lunch) P1 sembly]											
	16:00	1	17:00							35 - 240 min P1 [sold						
	17:00	1	18:00							PB to Stave]						
	18:00	_	19:00													
	19:00		20:00													

Stave Stave	N-1 N				CR		G	A		
Stave	14:41		CMM-TABLE	GLUE-ST	TAB-CUT-TABLE	BOND-CK-ST	TEST-ST-CR	SOLD-ST-CR	SOLD-ST-GA	TEST-ST-GA
MON	07:00	- 08:00								
	08:00	09:00	33 - 180 min P1 [Stave final metrology]							
	09:00	10:00								
	10:00	11:00	17 - 135 min P1 [CP							
	11:00	12:00	planarity]							
	12:00	13:00							34 - 240 min (+60 min lunch) P1 [sold PB to Stave]	
	13:00	14:00								
	14:00	15:00								
	15:00	16:00	18 - 360 min (+60mi P2 P3 [HS-U as	in lunch) P1 sembly]						
	16:00	17:00							35 - 240 min P1 [sold	
	17:00	18:00							PB to Stave]	
	18:00	19:00								
	19:00	20:00								

Stave	N-1										
Stave	N					CR	1			G	A
Stave	N-+1]									
				CMM-TABLE	GLUE-ST	TAB-CUT-TABLE	BOND-CK-ST	TEST-ST-CR	SOLD-ST-CR	SOLD-ST-GA	TEST-ST-GA
WED	07:00		18:00								
WED	07.00		0.00						21 - 60 min P1		
	08:00	0	09:00	23 - 135 min P1 (CP					[u-arms HS-U.]	31 - 130 min P1 (Pb-	
				planarity]						BB-FB-U sold.]	
	09:00	1	0:00					22 - 150 mi	n P1 [Qualification test		
									HS-0]		
	10:00	1	1:00							32- 130 min P1 [Pb-BB- EB-L sold]	
	11:00	1	2:00							i de contraj	
	22.00	H									
	12:00	1	3:00								
				24 - 360 min (+60 m	in lunch) P1						
	13:00	1	4:00	P2 P3 [HS-L as	sembly]						
	14:00	1	15:00								
	15:00	1	6:00								
	16:00	1	17:00								
	17:00	1	8:00								
	10.05										
	18:00	1	19:00								
	19:00	2	20:00								
	19.00	2	0.00								

	Stave N-1 Stave N Stave N-+1						GA					
			, 		CMM-TABLE	GLUE-ST	TAB-CUT-TABLE	BOND-CK-ST	TEST-ST-CR	SOLD-ST-CR	SOLD-ST-GA	TEST-ST-GA
	тни	07:00		08:00								
				00.00								
		08:00	H	09:00	25 – 150 min P1 [markers meas.]							
		09:00		10:00	[
							8 - 65min P1 P2 [HIC cut]					
		10:00	\square	11:00								38 - 150 min P1 [Qualification test HS-L]
		11:00		12:00			9 - 65min P1 P2 [HIC cut]					
							10 - 65min P1 P2 [HIC cut]					
		12:00	\mathbb{H}	13:00						26 - 480 min (+60		
		13:00		14:00						min lunch) P1 P2 [sold/desold, HS-U]]		
							11 - 65min P1 P2 [HIC cut]					
		14:00	\vdash	15:00								
		15:00	5:00 16:00		29 - 365 min P1 P2 [Glue HS-U to SF]		12 - 65min P1 P2 [HIC cut]					
		16:00 47		17-00			13 - 65min P1 P2 [HIC cut]					
		16:00	17:00									
		17:00		18:00			14 - 65min P1 P2 [HIC cut]					
		18:00		19:00								
		19:00		20:00								

Stave Stave	N-1 N		CR						GA	
Stave	14:+1		CMM-TABLE	GLUE-ST	TAB-CUT-TABLE	BOND-CK-ST	TEST-ST-CR	SOLD-ST-CR	SOLD-ST-GA	TEST-ST-GA
FRI	07:00	08:00								
	08:00	09:00						27 - 60 min P1 [u-arms HS-L.]	15 - 85 min [Capacitors sold to PB]	
	09:00	10:00					28 - 150 mir	n P1 (Qualification test		
	10:00	11:00						HS-L]	16 - 85 min [Capacitors sold to PB]	
	11:00	12:00								
	12:00	13:00								
	13:00	14:00	30 - 360 min (+60 m P2 [Glue HS-L	nin lunch) P1 to SF]						
	14:00	15:00								39 - 60 min P1 [store and ship]
	15:00	16:00								
	16:00	17:00								
	17:00	18:00								
	18:00	19:00								
	19:00	20:00								

Implementation of the Internal Organization:

* Internal Database with the ongoing work -> Status of Production

* CERN Production Database: forms and reports should be filled by those who performed the activity (~100 forms and DB reports per Stave!).

* The **Supervisor** has direct access to the Production Database \rightarrow he/she has to check the data and update/close it if necessary.

* This is just a proposal: the most important thing is the **time constraint** (some activities can be parallelized; others are sequential).

Most likely: "One thing goes wrong → Add 1 week to the deadline."

Proposal (for June Shifts):

* LAN MySQL Database, PHP/CSS/JS interface (working on it).

- * To performs an activity, one should identify him/herself and follow the checklist (to be provided ASAP).
- * Those who perform the activity have to fill both form and report.

Add-ons (later on):

1. Fill in the forms automatically from the internal database.

2. Create a report on the Production Database automatically from the internal database.