

# Schedule shown at BPAC Feb. 2017



PARel Dere													1		ILL
Task Name	1. Qtl, 20			2. Qtl, 20			3. Qtl, 20		6	4. Qtl, 20			1. Qtl, 20		
	Jan	Feb	Mrz	Apr	Mai	Jun	Jul	Aug	Sep	Okt	Nov	Dez	Jan	Feb	Mrz
* PXD 9.9 production			-				-								
PXD 9.10 production				1											
Phase II															
Phase III															
<sup>□</sup> ASICs						-									
<sup>©</sup> SwitcherB18 V2.1															
bumped chips available			∳ 17.	03.											
DCDB4.2															
chips available															
DHPT1.2b			-												
chips available			< <mark>-03.0</mark> 3.												
Kapton Flex main prod			-												
Kaptons available			< 03.0 <mark>3</mark> .				+								
Main Module Assembly															
<sup>©</sup> L1-FWD, L1-BWD, 24 modules (+50%)															
Flip Chip															
SMD															
Test			1	<u> </u>		1									
<sup>©</sup> L2-FWD, L2-BWD, 32 modules (+50%)															
Flip Chip						t	<u> </u>								
SMD								-							
Test							×								
Kapton attachment				-					•						
L1-FWD, L1-BWD															
L1 Modules finished						÷ 15	.06.								
L2-FWD, L2-BWD							4								
L2 Modules finished								•	31.08.						
Module testing															
Ladder Assembly					i L			1							
Ladder testing and Half Shell Assembly					Ľ	×		:		<b></b>					
Contingency											<b>_</b>				
PXD commissioning at DESY														<b></b>	
PXD half shells at KFK														♦ 15	.02.





	Name	Nickname	Sensor	Chipset	Remarks
1	W30-OB1	module0	PXD9-6	DCDB4/DHPT1.0/SWB2.0	Operational at HLL $\rightarrow$ PF?
2	W30-OB2	module0	PXD9-6	DCDB4/DHPT1.0/SWB2.0	SWBs broken due to operator error, $\rightarrow$ ladder tests
3	W30-OF1	module0	PXD9-6	DCDB4/DHPT1.0/SWB2.0	Removed from H7, short in matrix area??, at MPP $\rightarrow$ ladder tests
4	W30-OF2	module0	PXD9-6	DCDB4/DHPT1.0/SWB2.0	Crack in sensor area to balcony, SMD on, no Kapton, at HLL
5	W30-IB	DESY 0	PXD9-6	DCDB4/DHPT1.1/SWB2.0	2016&2017 beam test, at DESY
6	W35-OB1	DESY 0	PXD9-6	DCDB4/DHPT1.1/SWB2.0	2016&2017 beam test, at DESY $\rightarrow$ broken
7	W36-IF	Probe test	PXD9-6	DCDB4/DHPT1.1/SWB2.1	Init. for probe card test $\rightarrow$ kapton being attched $\rightarrow$ PF?
8	W36-IB	Probe test	PXD9-6	DCDB4/DHPT1.1/SWB2.1	SWB not mounted (FC problem), kapton attached, at TUM
9	W31-IF	Persy1	PXD9-7	DCDB4.2/DHPT1.1/SWB2.1	2017 beam test, 3/6 SWB operational
10	W31-IB	Persy1	PXD9-7	DCDB4.2/DHPT1.1/SWB2.1	JTAG chain of SWBs broken, $ ightarrow$ try repair
11	W31-OF1	Persy1	PXD9-7	DCDB4.2/DHPT1.1/ <b>SWB2.0</b>	2017 beam test→ stays at Persy
12	W31-OB1	Persy1	PXD9-7	DCDB4.2/DHPT1.1/SWB2.1	JTAG chain of SWBs broken $\rightarrow$ try repair
13	W31-OB2	Persy2	PXD9-7	DCDB4.2/DHPT1.1/SWB2.1	JTAG chain of SWBs broken $\rightarrow$ SWBs removed $\rightarrow$ ladder tests?
14	W37-IB	Persy2	PXD9-7	DCDB4.2/DHPT1.1/SWB2.1	JTAG chain of SWBs broken, repaired after 2nd reflow



## PXD9-EMCM and PXD9-Dummy



	Name	Nickname	Sensor	Chipset	Remarks
1	W28-OB2	PXD9-Dummy	PXD9-7	DCDB2/DHPT1.0/SWB-X	→ Ladder tests
2	W28-OF2	PXD9-Dummy	PXD9-7	DCDB2/DHPT1.0/SWB-X	$\rightarrow$ Ladder tests
3	W27-IB	PXD9-EMCM1	PXD9-6	DCDB2/DHPT1.1/SWB-X	$\rightarrow$ Persy
4	W27-IF	PXD9-EMCM1	PXD9-6	DCDB2/DHPT1.1/SWB-X	$\rightarrow$ Persy
5	W27-OF1	PXD9-EMCM1	PXD9-6	DCDB2/DHPT1.1/SWB-X	$\rightarrow$ Persy
6	W27-OB1	PXD9-EMCM1	PXD9-6	DCDB2/DHPT1.1/SWB-X	$\rightarrow$ Persy
7	W28-IB	PXD9-EMCM1	PXD9-7	DCDB2/DHPT1.1/SWB-X	$\rightarrow$ Persy
8	W28-IF	PXD9-EMCM1	PXD9-7	DCDB2/DHPT1.1/SWB-X	$\rightarrow$ Persy
9	W28-OB1	PXD9-EMCM1	PXD9-7	DCDB2/DHPT1.1/SWB-X	$\rightarrow$ Persy
10	W28-OF1	PXD9-EMCM1	PXD9-7	DCDB2/DHPT1.1/SWB-X	$\rightarrow$ Persy
11	W29-IB	PXD9-EMCM2	PXD9-8	DCDB4.2/DHPT1.2b/SWB-X	Final EOS $\rightarrow$ final system tests on the bench
12	W29-IF	PXD9-EMCM2	PXD9-8	DCDB4.2/DHPT1.2b/SWB-X	Final EOS $\rightarrow$ final system tests on the bench
13	W29-OB1	PXD9-EMCM2	PXD9-8	DCDB4.2/DHPT1.2b/SWB-X	Final EOS $\rightarrow$ final system tests on the bench
14	W29-OF1	PXD9-EMCM2	PXD9-8	DCDB4.2/DHPT1.2b/SWB-X	Final EOS $\rightarrow$ final system tests on the bench

## ▷ Modules #1-#10 were kind of rehearsal (FC issue is solved by higher reflow temp.)

- → FC: 10 working days, including setup and tests with #1 and #2
- → SMD: also about 10 working days (initial problems with equipment)
- $\mapsto$  SMD, probe card testing and kapton attachment has to go interleaved, more practice needed





Combined	PXD9-6 (3 wafers)			PXD9-7 (4 wafers)			PXD9-8 (9 wafers)									
Wafer arrangement	W30	W35	W36	W31	W37	W38	W40	W32	W33	W41	W42	W43	W44	W45	W46	W47
Inner Forward	G58.4	G98.4	G99	G98.9	G98.4	B98.8	G100	G100	B98.4	G99.5	G99.3	G100	G99	M99.5	G99.5	G99.5
Outer Forward 1	G99.9	G98.4	G99	G98.4	G98.1	B98.4	G99.5	G99.5	G100	G99.5	M100	G100	G100	G99.5	G100	G98.1
Outer Forward 2	G99.5	M99	G99.5	G99	B98.4	B98.4	M99.5	G100	G100	B99.5	M100	B99.5	G100	G100	G99.9	B98.4
Outer Backward 1	G97.5	G88	G98.4	G99.4	G98.4	G97.9	M100	B99	G99.5	B98.4	G99.5	B38.4	G99	B99.5	G99.5	B98.4
Outer Backward 2	G98.6	G96.9	G98.6	G99.5	G99.5	B98.1	G99.9	G100	B99	B98.4	G100	M99.9	G100	G100	G100	B98.4
Inner Backward	G97.9	M100	G99.5	G100	G98.4	G98.4	G100	G100	B98.4	G100	G100	G100	G100	G100	G99.5	G99.5

Combined	PXD9-9 (6 wafers)						PXD9-10	PXD9-10 (6 wafers)					
Wafer arrangement	W01	W02	W03	W04	W05	W06	W07	W08	W09	W10	W11	W12	W13
Inner Forward	B95	G99	G99	G99	G99.3	G98.8	B17.9	G99.5	G99.4	G99	G99.3	B100	G99.5
Outer Forward 1	G99.6	G99	B99.2	G99.3	G99.5	G98.9	B37.9	B99	G99	G98.4	G99	G99	G97.9
Outer Forward 2	B98.2	B99	G99.4	B98	G99.3	G97.9	B37.9	G99.5	G99.5	G98.4	G99	M98.9	B98.2
Outer Backward 1	G100	B98.9	G99	M99	G99	G99	B37.9	G99	G99	G98.4	B95.5	G99.5	B98.2
Outer Backward 2	B99	B98.9	B99.4	B99.5	B98.9	B99	B37.9	G99	M99.5	B97.6	B98.8	G99	G98.4
Inner Backward	G94.4	M99	G100	M99.5	G98.4	M99.5	B17.9	B99.5	G100	B99	M98.7	B99	G99

▷ Use pre-production PXD9-7 for phase 2 ladders (?)





	Pre-production									
	W31	W37	W38	W40						
IF	98.8 persy1	98.4 → P2	0	100.0 → P2						
OF1	99.0 persy1	98.1 → P2	0	99.5 →P2						
OF2	99.0	0	0	99.3						
OB1	99.4 persy1	98.4 → P2	97.9	100.0						
OB2	99.5 persy2	99.5	0	99.9 → P2						
IB	100.0 persy1	99.0 persy2	99.0 → P2	100.0 → P2						
Total	100%	83.3%	50%	100%						

▷ Modules for phase 2 (proposal)

- → W38-IB & W40-IB
- → W37-IF & W40-IF
- → W37-OB1 & W40-OB2
- → W37-OF1 & W40-OF1

Start as soon as components availableWhen?





### Thursday, 23 March 2017

14:00 - 14:20	Module Production Overview and Plans 20'
14:20 - 14:40	ASIC Status and availability 20'
14:40 - 15:00	Module Series Testing 20'
15:00 - 15:20	Services Situation 20'
15:20 - 15:40	DHH: Optical Data transmission and firmware status 20'
15:40 - 16:00	Ladder Assembly and Ladder Mounting 20'

#### 16:00 - 16:20 Test Beam debriefing and plans at Persy 20'

- 16:20 16:40 ONSEN Status and Plans 20'
- 16:40 17:00 AOB 20'





- ▷ Stefan is ill with no clearly confirmed date, when he will be available
- ▷ A number of hot items only partly covered at the moment
  - → Patch panels:
    - → MPP kindly agreed to make the layout
    - → Status/versions of the current PP not completely clear
    - → We have to decide on the thickness of the Infiniband cable (tests needed)
    - → Need to contact cable/pp manufacturer
    - → Intermediate solution for test setups is being designed by Christian Koffmane
  - → Dock box PCB:
    - → Layout needs update

Services

- $\rightarrow$  As soon as Stefan is back, we should offer help to get things done
- ▷ Kapton:
  - → Organized anyway by MPP, what is the status there?
- $\triangleright$  Power Supplies
  - → I am not aware of any issues here ...