Activities at BNL: Ladders Assembly

Rachid Nouicer, Steven Andrade, and Robert Pisani

HDIs/Chips

Chips/Sensors

Production Ladders

34	Barrel 1
48	Barrel 2
81	Total

South Chips/HDI Status columns: U26 U25 U24 U23 U22 U21 U20 U19 U18 U17 U16 U15 U14 / U13 U12 U11 U10 U9 U8 U7 U6 U5 U4 U3 U2 U1

North Chips/HDI Status columns: U26 U25 U24 U23 U22 U21 U20 U19 U18 U17 U16 U15 U14 / U13 U12 U11 U10 U9 U8 U7 U6 U5 U4 U3 U2 U1

Count	New Name	Barrel Type HDI/Stave Glued	Stave Batch-ID / HDI ID	South Data File Name	North File Name	South Sensor A	Leakage Current (nanoAmp)	South Sensor B	Leakage Current (nanoAmp)	South File Name	North Sensor A	Leakage Current (nanoAmp)	North Sensor B	Leakage Current (nanoAmp)	North File Name	Survey File	Encaps South	Encaps File Name	Encaps North	Encaps File Name	Ladder Class 1 to 5	Bad Channels	Source Test File
1	PB2_L001	2	Batch 1	20210319-1256_0_2	20210319-1245_0_2	2	160	2	120	20210414-137_0_1	2	160	2	750	20210414-1040_0_1		2	20210419-1009_0_1	2	20210419-1003_0_1			
2	PB2_L002	2	Batch 1	20210319-1220_0_2	20210319-1145_0_2	2	340	2	350	20210414-155_0_1	2	150	2	120	20210414-1206_0_1		2	20210415-1141_0_1	2	20210415-1156_0_1			
3	PB2_L003	2	Batch 1	20210329-1036_0_2	20210329-1018_0_2	2	120	2	150	20210454-17238-0_1	2	150	2	120	20210504-1049_0_1		2	20210504-1703_0_1	2	20210504-1603_0_1			
4	PB1_L001	1	Batch 1	20210319-1228_0_2	20210319-1055_0_2	2	190	2	140	20210414-1222_0_1	2	150	2	190	20210414-1231_0_1		2	20210415-1620_0_1	2	20210415-1602_0_1			
5	PB2_L004	2	Batch 1	20210322-1426_0_2	20210322-1417_0_2	2	150	2	160	20210414-1305_0_2	2	150	2	290	20210414-1255_0_1		2	20210414-1305_0_1	2	20210414-1255_0_1			
6	PB1_L002	1	Batch 1	20210319-1633_0_2	20210319-1618_0_2	2	160	2	600	20210414-0944_0_1	2	280	2	410	20210416-1011_0_1		2	20210416-1011_0_1	2	20210416-1000_0_1			
7	PB2_L005	2	Batch 1	20210325-1636_0_2	20210325-1604_0_2	2	500	2	310	20210416-108_0_1	2	150	2	100	20210416-1126_0_1		2	20210420-1209_0_1	2	20210420-1159_0_1			
8	PB1_L003	1	Batch 1	20210325-1915_0_2	20210325-1804_0_2	2	300	2	120	20210418-0938_0_1	2	160	2	140	20210418-0936_0_1		2	20210418-0938_0_1	2	20210418-0929_0_1			
9	PB1_L004	1	Batch 1	20210329-1116_0_2	20210329-1050_0_2	2	200	2	120	20210414-738_0_1	2	160	2	130	20210414-1644_0_1		2	20210420-1149_0_1	2	20210420-1132_0_1			
10	PB2_L006	2	Batch1	20210419-1216_0_1	20210419-1226_0_1	2	100	2	130	20210420-545_0_1	2	100	2	120	20210420-1517_0_1		2	20210421-1717_0_1	2	20210421-1728_0_1			
11	PB1_L005	1	Batch 2 S-038/N-039	20210506-1003_0_1	20210505-1011_0_1	2	210	2	230	20210602-1533_0_1	2	240	2	270	20210602-1520_0_1		2	20210621-1112_0_1	2	20210621-1100_0_1			
12	PB1_L006	1	Batch 2 S-040/N-206	20210507-1126_0_1	20210507-11120_0_1	2	200	2	160	20210519-1414_0_1	2	160	2	120	20210519-1420_0_1		2	20210524-1423_0_1	2	20210524-1429_0_2			
13	PB1_L007	1	Batch 2 S-203/N-204	20210507-1548_0_1	20210507-1542_0_1	2	150	2	140	20210519-637-0_1	2	370	2	120	20210519-1621_0_1		2	20210524-1447_0_1	2	20210524-1437_0_1			
14	PB1_L008	1	Batch 2 S-201/N-202	20210510-1644_0_1	20210510-1650_0_1	2	170	2	1400	20210526-206_0_1	2	210	2	100	20210526-1151_0_1		2	20210528-1055_0_1	2	20210528-1030_0_1			
15	PB1_L009	1	Batch 2 n-199/N-200	20210511-1126_0_1	20210511-1142_0_1	2	210	2	230	20210531-109_0_1	2	340	2	510	20210531-1058_0_1		2	20210622-1237_0_1	2	20210622-1215_0_1			
16	PB1_L010	1	Batch 2 S-197/N-198	20210511-1716_0_1	20210511-1725_0_1	2	190	2	230	20210602-128_0_1	2	210	2	230	20210602-1117_0_1		2	20210628-1058_0_1	2	20210628-1037_0_1			
17	PB1_L011	1	Batch 2 S-222/N-223	20210511-1741_0_1	20210511-1732_0_1	2	160	2	170	20210608-949_0_1	2	210	2	280	20210608-1139_0_1		2	20210628-1123_0_1	2	20210628-1113_0_1			
18	PB1_L012	1	Batch 2 S-219/N-220	20210512-1354_0_1	20210512-1405_0_1	2	350	2	2.3		2	280	2	450	20210602-1000_0_1		2	1		1				
19	PB1_L013	1	Batch 2 S-217/N-	20210519-1346_0_1	20210519-1354_0_1	2	310	2	260	20210609-1535_0_1	2	380	2	500	20210609-1524_0_1		2	20210628-1533_0_1	2	20210628-1539_0_1			
20	PB1_L014	1	Batch 2 S-207/N-208	20210525-1318_0_1	20210525-1242_0_1	2	200	2	300	20210611-1506_0_1	2	200	2	300	20210611-1457_0_1		2	20210630-1081_0_1	2	20210630-1019_0_1			
21	PB1_L015	1	Batch 2 S-209/N-210	20210525-1357_0_1	20210525-1347_0_1	2	100	2	100	20210611-1546_0_1	2	200	2	300	20210611-1542_0_1		2	20210706-1600_0_1	2	20210706-1531_0_1			
22	PB1_L016	1	Batch 2 S-211/N-212	20210525-1420_0_1	20210525-1406_0_1	2	100	2	100	20210615-1014_0_1	2	200	2	500	20210702-1327_0_1		2	20210702-1158_0_1	2	20210702-1327_0_1			
23	PB1_L017	1	Batch 2 S-213/N-214	20210525-1437_0_1	20210525-1429_0_1	2	300	2	400	20210616-930_0_1	2	200	2	300	20210706-1504_0_1		2	20210706-1505_0_1	2	20210702-1149_0_1			
24	PB1_L018	1	Batch 2 S-215/N-216	20210528-1140_0_1	20210528-1131_0_1	2	100	2	100	20210616-101_0_1	2	100	2	200	20210616-1047_0_1		2	20210707-1356_0_1	2	20210702-1447_0_1			
25	PB2_L007	2	BH2-54 S-224/N-225	20210709-1526_0_1	20210709-1531_0_1	2	160	2	120	20210813-220_0_8	2	170	2	120	20210813-1227_0_8		2	20210901-1158_0_5	2	20210901-1151_0_5			
26	PB2_L008	2	BH2-55 S-226/N-227	20210707-1411_0_1	20210707-0948_0_1	2	160	2	120	20210813-1024_0_8	2	160	2	120	20210813-1011_0_8		2	20210901-1223_0_5	2	20210901-1206_0_5			
27	PB2_L009	2	BH2-57 S-238/N-229	20210707-1548_0_1	20210707-1501_0_1	2	160	2	110	20210813-1253_0_8	2	150	2	120	20210813-1246_0_8		1	20210901-_0_5	1	20210601-_0_5			
28	PB2_L010	2	BH2-58 S-230/N-231	20210708-1316_0_1	20210708-1311_0_1	2	162	2	119	20210819-1246_0_8	2	164	2	120	20210819-1233_0_8		2	20210901-1301_0_5	2	20210901-1246_0_5			
29	PB2_L011	2	BH2-61 S-232/N-233	20210708-1454_0_1	20210708-1908_0_1	2	160	2	118	20210819-1214_0_8	2	147	2	114	20210819-1026_0_8		2	20210902-1114_0_5	2	20210902-1102_0_5			
30	PB2_L012	2	BH2-63 S-234/N-235	20210709-1614_0_1	20210709-1609_0_1	2	150	2	110	20210819-1324_0_8	2	147	2	120	20210819-1301_0_8		2	20210902-1154_0_5	2	20210902-1139_0_5			
31	PB2_L013	2	BH2-64 S-236/N-237	20210709-1632_0_1	20210709-1621_0_1	2	156	2	117	20210819-1429_0_8	2	140	2	115	20210819-1341_0_8		2	20210902-1212_0_5	2	20210902-1221_0_5			
32	PB2_L014	2	BH2-66 S-238/N-239	20210709-1539_0_1	20210709-1600_0_1	2	134	2	100	20210825-1504_0_8	2	123	2	110	20210825-1427_0_8		2	20210901-1309_0_5	2	20210902-1257_0_5			
33	PB2_L015	2	BH2-67 S-240/N-241	20210713-1344_0_1	20210713-1353_0_1	2	150	2	110	20210825-1409_0_5	2	140	2	110	20210825-1358_0_5		2	20210903-1033_0_5	2	20210903-1012_0_5			

HDIs/Chips — Chips/Sensors — Ladder Encapsulated — Classes

Production Ladders		
34	Barrel 1	
48	Barrel 2	
81	Total	

Count	New Name	Barrel Type HDI/Stave Glued	Stave Batch-ID / Hdi ID	South Data File Name	North File Name	South Sensor A	South Leak (nA)	South Sensor B	South Leak (nA)	South Sensor File	North Sensor A	North Leak (nA)	North Sensor B	North Leak (nA)	North Sensor File	Survey File	Encaps South	Encaps South File	Encaps North	Encaps North File
34	PB2-L016	2	BH2-69 S-242/N-243	20210713-1422_0,1	20210713-1412_0,1	2	150	2	140	20210825-1346_0,5	2	150	2	110	20210825-1310_0,5	2	2	20210908-1112_0,5	2	20210908-1032_0,5
35	PB2-L017	2	BH2-70 S-192/N-193	20210714-1150_0,1	20210714-1357_0,1	2	150	2	110	20210825-1310_0,5	2	140	2	110	20210825-1319_0,5	2	2	20210914-1350_0,5	2	20210914-1357_0,5
36	PB2-L018	2	BH2-72 S-194/N-195	20210719-0932_0,1	20210719-0935_0,1	2	164	2	142	20210825-1347_0,5	2	146	2	110	20210909-1235_0,5	2	2	20210909-1236_0,5	2	20210909-1228_0,5
37	PB2-L019	2	BH2-73 S-182/N-196	20210719-1000_0,1	20210719-0953_0,1	2	175	2	135	20210825-1102_0,5	2	180	2	2000	20210825-1215_0,5	2	2	20210914-1428_0,5	2	20210914-1416_0,5
38	PB2-L020	2	BH2-75 S-148/N-150	20210727-0920_0,1	20210727-0920_0,1	2	100	2	130	20210825-1223_0,5	2	156	2	123	20210909-1215_0,5	2	2	20210909-1305_0,5	2	20210909-1253_0,5
39	PB2-L021	2	BH2-76 S-166/N-167	20210719-1727_0,1	20210719-1720_0,1	2	100	2	130	20210826-1207_0,5	2	195	2	205	20210826-1146_0,5	2	2	20210914-1446_0,5	2	20210914-1437_0,5
40	PB2-L022	2	BH2-60 S-314/N-315	20210927-1101_0,5	20210927-1129_0,5	2	123	2	204	20211007-1153_0,5	2	162	2	119	20211007-1147_0,5	2	2			
41	PB2-L023	2	BH2-79 S-188/N-244	20210730-1325_0,1	20210730-1332_0,1	2	146	2	105	20210826-1224_0,5	2	131	2	100	20210826-1216_0,5	2	2	20210915-1514_0,5	2	20210915-1446_0,5
42	PB2-L024	2	BH2-90 S-316/N-317	20210927-1218_0,5	20210927-1210_0,5	2	126	2	236	20211007-1317_0,5	2	157	2	135	20211007-1200_0,5	2	2			
43	PB2-L025	2	BH2-82 S-289/N-290	20210813-1042_0,8	20210813-1035_0,8	2	120	2	152	20210909-1026_0,5	2	152	2	132	20210909-1018_0,5	2	2	20210915-1001_0,5	2	20210915-0540_0,5
44	PB2-L026	2	BH2-84 S-291/N-292	20210810-1703_0,8	20210810-1656_0,8	2	175	2	130	20210909-1427_0,5	2	220	2	140	20210826-1416_0,5	2	2	20210916-1242_0,5	2	20210916-1228_0,5
45	PB2-L027	2	BH2-85 S-293/N-294	20210810-1723_0,8	20210810-1715_0,8	2	143	2	120	20210830-1312_0,5	2	161	2	134	20210830-1259_0,5	2	2	20210916-1334_0,5	2	20210916-1323_0,5
46	PB2-L028	2	BH2-87 S-157/N-181	20210813-1095_0,8	20210813-1108_0,8	2	153	2	130	20210908-1011_0,5	2	173	2	300	20210908-0948_0,5	2	2	20210920-0950_0,5	2	20210917-0941_0,5
47	PB2-L029	2	BH2-88 S-183/N-184	20210813-1129_0,8	20210813-1117_0,8	1	0	1	0	20210913-_0,5	1	141	1	112	20210913-_0,5		1		1	
47	PB2-L030	2	BH2-91 S-185/N-186	20210811-1013_0,8	20210811-1041_0,8	2	148	2	115	20210830-1332_0,5	2	149	2	127	20210830-1322_0,5	2	2	20210914-1403_0,5	2	20210914-1354_0,5
48	PB2-L031	2	BH2-93 S-187/N-188	20210811-1104_0,8	20210811-1053_0,8	2	189	2	130	20210831-1314_0,5	2	190	2	210	20210831-0952_0,5	2	2	20210914-1506_0,5	2	20210914-1459_0,5
49	PB2-L032	2	BH2-94 S-190/N-191	20210730-1405_0,1	20210730-1427_0,1	2	100	2	110	20210831-1416_0,5	2	160	2	110	20210831-1406_0,5	2	2	20210921-1511_0,5	2	20210921-1505_0,5
50	PB1-L019	1	BH3-75 S-205/N-295	20210913-1635_0,5	20210913-1625_0,5															
51	PB1-L020	1	BH3-76 S-282/N-283	20210909-1006_0,5	20210909-0952_0,5	1	10	1	10		1	10	1	10						
52	PB1-L021	1	BH3-78 S-284/N-285	20210830-1246_0,5	20210830-1236_0,5	1	10	1	10		1	10	1	10						
53	PB1-L022	1	BH3-79 S-286/N-287	20210908-1209_0,5	20210908-1157_0,5	1	10	1	10		1	10	1	10						
54	PB1-L023	1	BH3-80 S-271/N-272	20210913-1700_0,5	20210913-1648_0,5															
55	PB1-L024	1	BH3-87 S-273/N-274	20210917-0944_0,5	20210917-0907_0,5	1	10	1	10		1	10	1	10						
56	PB1-L025	1	BH3-88 S-275/N-276	20210917-1006_0,5	20210917-0957_0,5	1	10	1	10		1	10	1	10						
57	PB1-L026	1	BH3-89 S-277/N-278	20210917-1023_0,5	20210917-1018_0,5	1	10	1	10		1	10	1	10						
58	PB1-L027	1	BH3-90 S-279/N-280	20211007-1145_0,5	20211007-1125_0,5															
59	PB1-L028	1	BH3-81 S-296/N-297	20210908-1240_0,5	20210908-1224_0,5	1	10	1	10		1	10	1	10						
60	PB1-L029	1	BH3-83 S-298/N-299	20210910-0955_0,5	20210910-0947_0,5	1	10	1	10		1	10	1	10						
61	PB1-L030	1	BH3-84 S-300/N-301																	
62	PB1-L031	1	BH3-85 S-281/N-288	20210920-1124_0,5	20210920-1120_0,5	1	10	1	10		1	10	1	10						
63	PB1-L032	1	BH3-77 S-303/N-304	20210922-1102_0,5	20210922-1048_0,5	1	10	1	10		1	10	1	10						
64	PB1-L033	1	BH3-82 S-305/N-306	20210922-0925_0,5	20210922-0909_0,5	1	10	1	10		1	10	1	10						
65	PB1-L034	1	BH3-86																	

HDIs/Chips

Chips/Sensors

Ladder Encapsulated

Production Ladders

34	Barrel 1
48	Barrel 2
81	Total

Legend:
- 0 — HDI is BAD
- 1 — Chip is Mounted
- 2 — Chip is Good

- D — HDI is BAD
- 1 — Chip is Mounted
- 2 — Chip is Good
- 3 — Chip/HDI has Half Entries

- Sensor is BAD
- Sensor is Mounted
- Sensor is Good

- 0 — Red
- 1 — Ready For Enc
- 2 — Good

Live Channels / Classes
- Class 1 = 100 %
- 99 % = < Class 2 < 100 %
- 98 % =< Class 3 < 99 %
- 98 % =< Class 4 < 98 %
- Class 5 < 97%

(table with ladder status data, rows PB2-L033 through PB2-L0, counts 66–81, Barrel Type HDI/Stave Glued = 2)

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* 21 ladders left to be assembled → 42 sensors type-A and 42 sensors type-B

* we have available at BNL: 24 sensors type-A and 24 sensors type-B corresponding to 12 ladders

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Needed: 42 – 24 = 18 (we need 18 sensors type-A and 18 sensors type-B) to end mass production at BNL.