

# Progress Report

RIKEN/RBRC

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# HDI 3<sup>rd</sup> Batch Production

		Quantity							Panel
2019/1/23		349670	302382	6					
2019/2/6	Preproduction	349670	302725	4					
2019/9/11		350963	306716	20					
2019/11/20		Exchanged	307469	1					
2020/4/2	Batch-1A	352075	310184	9	1	9	9		
2020/4/2		352075	310185_1	7	10	16	16		
2020/4/2		352075	310185_2	13	17	29	29		
2020/4/2		352075	310186	29	30	59	59	50 Good?	
2020/4/28		352075	310188	17	60	76	76	70 bad	
2020/4/28		352075	310189	24	77	100	100	80, 94 bad	
2020/6/8	Batch-1B	352075	311139	2	101	102	102		
2020/6/8		352075	311587_1	7	103	109	109	105 6	
2020/6/17		352075	311587_2	2	110	111	111		
2020/6/17		352075	311614	15	112	126	126	122 14	
2020/6/24		352075	311615	21	127	147	147	127 20	
2020/7/9		352075	312095	20	148	167	167	-160	
2020/7/9		352075	312096_1	6	168	173	173		
2020/7/21		352075	312096_2_1	7	174	180	180		
2020/7/28	Batch-1A	Exchanged	312096_2_2	1	24	24	180		
2020/9/28	Batch-2	353110	312532	20	181	200	200		
2020/9/28		353110	312533	16	201	216	216		
2020/9/29		353110	312534	7	217	223	223	-220	
2020/9/29		353110	312535	14	224	237	237		
2020/9/29		353110	312536	7	238	244	244		
2020/10/27		353110	313304	24	245	268	268	265 3	
2020/11/27		353110	313673	2	269	270	270	2 2	
2021/6/28	Batch-3		317333_2_2	11	271	281	281		
2021/7/5			317338	14	282	295	295		
2021/7/19			317341	23	296	319	319		
2021/8/6				50					

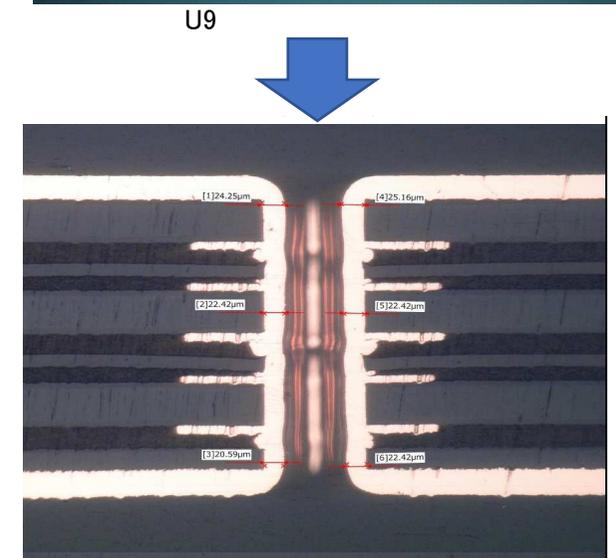
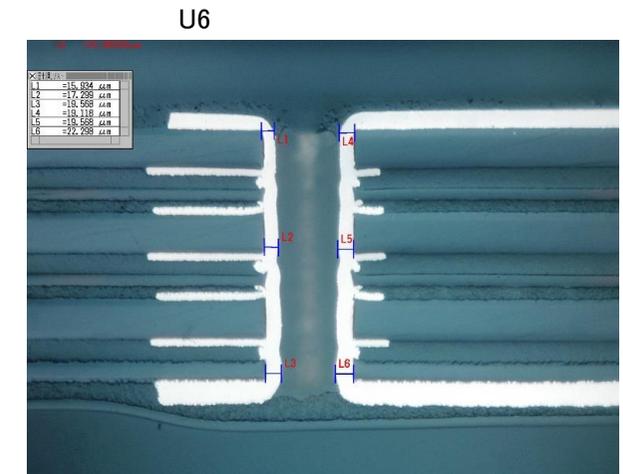
- 23 HDI's are to be shipped to BNL on Aug.12<sup>th</sup>.
- Another ~50 HDIs to be delivered in Aug.6<sup>th</sup>.
- We have ~98 out of 100 HDI's to be produced as batch-3, so Yamashita will stops the production.
- Based on the agreement in May, they will produce more upon necessity if we find bad HDIs and number of HDIs becomes short.

# HDI Production

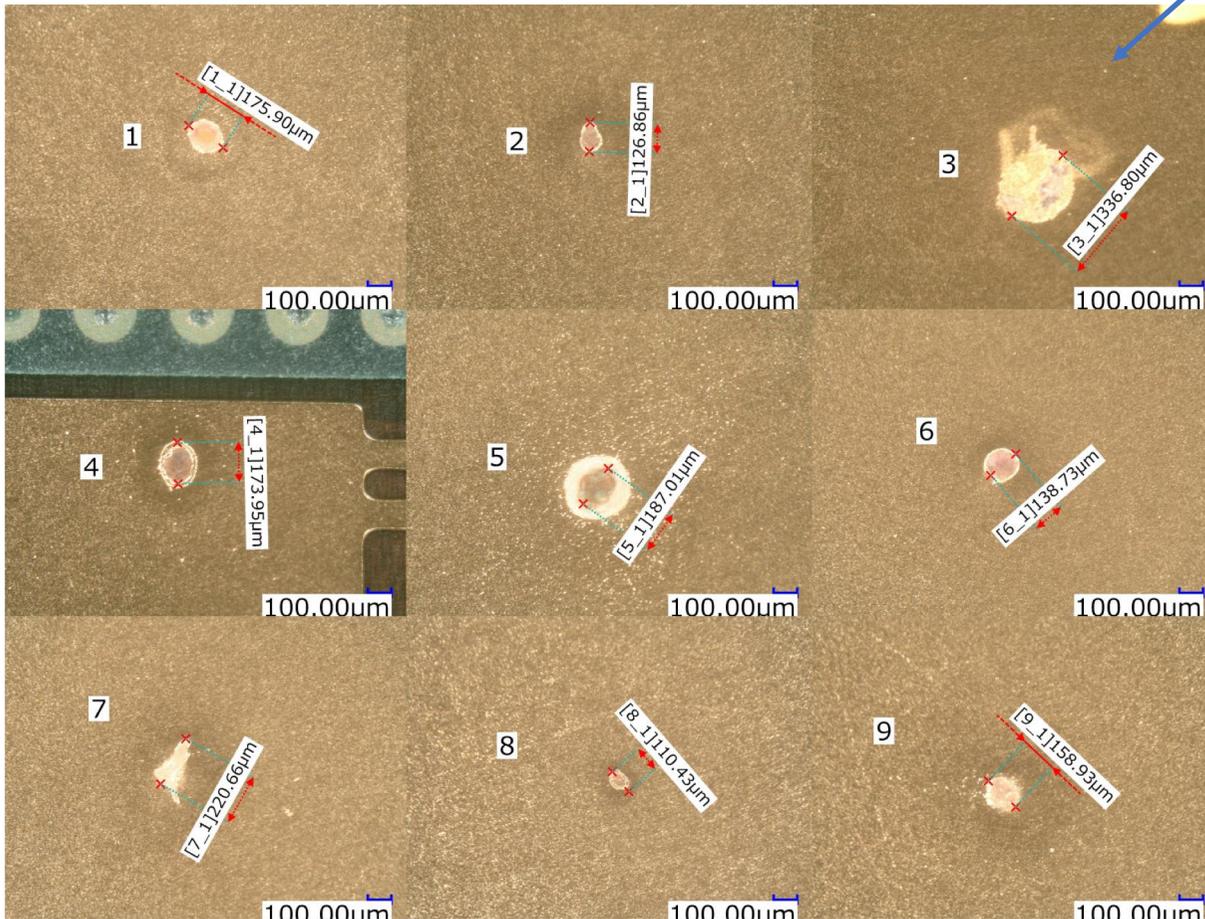
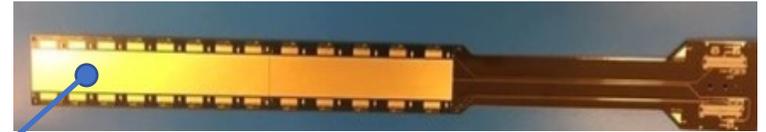
	Quantity	Bad HDI	Good HDI
Batch-1	182	70	112
Batch-2	90		90
Batch-3	100*		100
Total	372		302

\*To be delivered by 2021/08/6

- Productions were completed by the end of JFY2020, but found a few HDI's from particular LOT in batch-1 have fragile through-hole plating.
- Final batch-3 production (100 HDIs) is ongoing to compensate defected production HDIs.
- Half of 100 are done. HDI production is almost completed 08/2021.

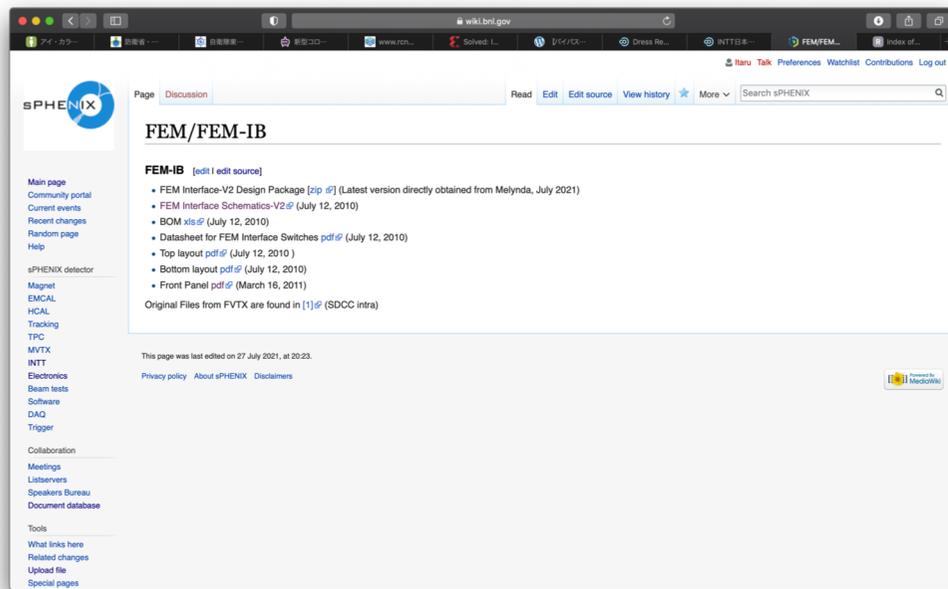


# HDI 3rd Batch Production



- Size of the unplated spots issue on the gold plating for the silicon pads on the top layer of HDI.
- The requirement of the spots is  $< 50\mu\text{m}$  and these spots are larger than  $100\mu\text{m}$ .
- Since these spots are just local and isolated, so I won't worry any defect in the conductivity of the silicon bias.
- If we agree, we let them move on.

# FEM-IB Manufacture



<https://wiki.bnl.gov/sPHENIX/index.php/FEM/FEM-IB>

- The final design of FEM-IB is obtained from LANL and posted in INTT-wiki.
- The gerber version may be slightly updated from the version posted in FVTX page <https://wiki.bnl.gov/sPHENIX/index.php/FEM/FEM-IB>
- Confirmed with Melynda (Proj. Manager of FVTX) there is no copy right issue.
- We can fabricate FEM-IB in other company as long as parts are available in the market.

# Backup Slides

# Gold Plating Issue in 2017 June

