

ATLAS ITk States Update



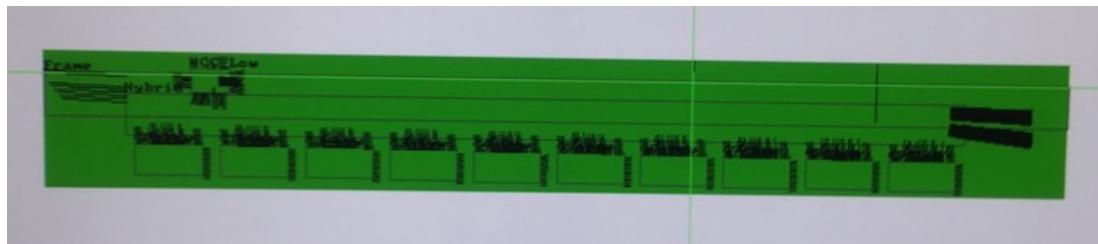
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2018.08.31

ATLAS ITk Process

❖ Wire bonding

- finish hybrid back-end, ABC ID, HCC and power-data program: Hyb0_3Y.bpx, Hyb4_7.bpx
- h3(HCC ID=19) and h7(HCC ID=20) wire bonding
- Issue: HCC 1st bond lift, Solution: increase 1st bond tail



❖ Pull test machine investigation

- XYZTEC Condor Sigma Lite
- DAGE 4000 Plus

TCT Test in Oxford

❖ INVESTIGATOR1 without radiation

- ## 1. adjust laser focus position

--analysis the data on the way

Plan

1. Module production

- test the three hybrids
- assembly SS15

2. TCT test

- analysis the data to find the laser focus position
- scan the 3-pixel with different designs

Thank you !

Back up_ Detail setting of program

Hyb0_3Y.bpx, Hyb4_7X.bpx

Comment:

- Hybrid_0 data wires (hybrid-frame) is different to Hybrid_1-3, Hybrid_4-7 are the same.
- Hyb4_7X_skewed.bpx is a Hyb4_7.bpx version while ABC130s have position offset

No	Reference	dependent Reference	Loop Height (um)	No of manual	No of Pattern	loop Shape Source	Deformation (%)	Ultrasonic (%)	Bond force (cN)
R1	Hybrid		900	2	2	70%	70%	32	24	27
R2	Hybrid2	Hybrid	1100	1	1	70%	70%	32	24	27
R3	Frame	Hybrid	500	2	2	70%	70%	32	24	27
R4	C0_Low	Hybrid	200	2	2	80%	80%	33	24	30
R5	C0_High	C0_Low	500	1	1	70%	70%	33	24	30
R6	C1_Low	Hybrid	200	2	2	80%	80%	33	24	30
R7	C1_High	C1_Low	500	1	1	70%	70%	33	24	30
...
R22	C9_Low	Hybrid	200	2	2	80%	80%	33	24	30
R23	C9_High	C9_Low	500	1	1	70%	70%	33	24	30
R24	HCC_Low	Hybrid	100	2	2	90%	90%	33	24	30
R25	HCC_Mid	HCC_Low	250	1	1	80%	80%	33	24	30
R26	HCC_High	HCC_Low	500	1	1	70%	70%	33	24	30

Back up_ Investigation of Pull tester

型号	普通配件	货期与售后	价格	联系方式	备注
XYZTEC Condor Sigma Lite (荷兰公司)	pull 100g(适合细丝) pull 1kg(适合粗丝或金带) shear 100kg(推芯片) shear 1kg(推bond)	3个月 售后北京	普通配件每个约3000美金; 夹拔力约6000美金(仅供参考, 估计不需要); 通常配置两三个普通配件, 总价格约7-8万美金。	孙强 13911128755 (北京瑞阳)	电动夹子, 可以拔锡球, bumping。 夹子分两种, 一种是夹球的, 接触面是弧形; 一种是夹丝或带, 接触面是平面。包括一个拉力和一个夹力两个传感器, 比较贵。
DAGE 4000 Plus	P100G (拉力) 250g推力 5kg推力	16周 售后北京 ex-works UK	配置一个测试头+拍摄功能: 8万美金以下	王经理 15995452561	若有需要可以去Aylebury工厂看样机