



# Hybrids Metrology

Abdualazem Fadol

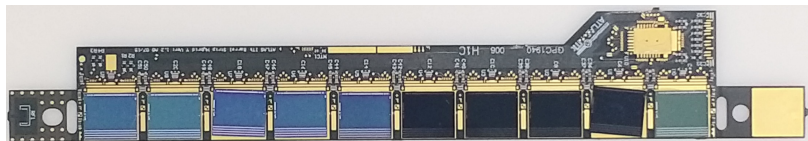
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INSTITUTE FOR  
COLLIDER  
PARTICLE  
PHYSICS

UNIVERSITY OF THE WITWATERSRAND

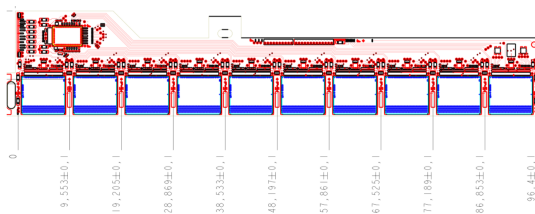




Y barrel hybrid (GPC1940060H1C)

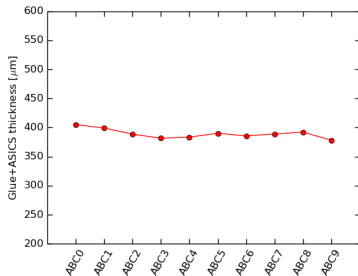
- Using smartscope to measure different part of the GPC1940060H1C hybrid.
- Such as hybrid stretch/Shrinkage, ASIC x and y position, glue height scan, etc.
- The objective:
  - Get familiar with hybrids metrology procedures.
  - Improving the smartscope use manual "QC\_Metrology Procedures-Hybrids"

# Hybrid Stretch/Shrinkage

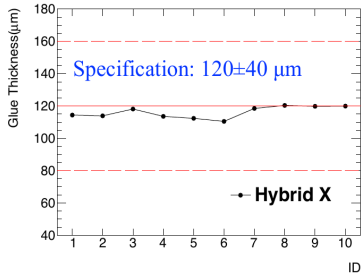


```
---Position Scan:
#Location X[mm] Y[mm]
Pos0 +000.00783 +000.00535
Pos1 +009.49615 -000.90219
Pos2 +019.15206 -000.89572
Pos3 +028.81398 -000.88917
Pos4 +038.47775 -000.88262
Pos5 +048.14108 -000.88257
Pos6 +057.79800 -000.87630
Pos7 +067.46193 -000.87640
Pos8 +077.12250 -000.87011
Pos9 +086.80016 -000.88912
Pos10 +096.33092 +000.00677
```

GPC1940060H1C



(d) GPC1940060H1C



(e) Deng Feng

- The plot on the left is measuring the glue height and the ASIC together.
- We use two points one on the ASIC and the other on the pad for each ABCStar.
- Not to be compared to the plot on the right, it's just to make sense to as how these numbers should be.

- A good start on the hybrid metrology! As getting familiar with the use of the smartscope.
- We manage to measure ASICs positions and glue and ASICs heights.

## Next . . .

- Need to get the proper glue height measurements.
- Try to compare measurements with hybrid production specification for tolerance.

***Any comments or suggestions are highly appreciated!***



**Thanks!**