

GLAST SSD mechanical measurements

Instruments and methods:

15cm X 30cm micrometric computer assisted table
with $5\mu\text{m}$ resolution over the whole range

Microscope with a computerized CCD camera with
768 X 576 pixels

pixel size = $0.64\mu\text{m}$

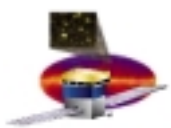
view area = $500\mu\text{m} \times 370\mu\text{m}$

Dimensional check: distance from strip 1 to strip 384

Nominal distance = $87324\mu\text{m}$

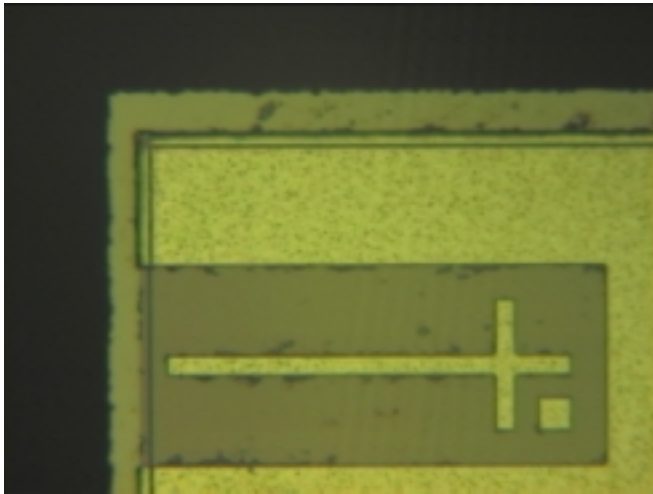
Measured distance = $87329 \pm 5\mu\text{m}$

Measured pitch = $228.01 \pm 0.01\mu\text{m}$

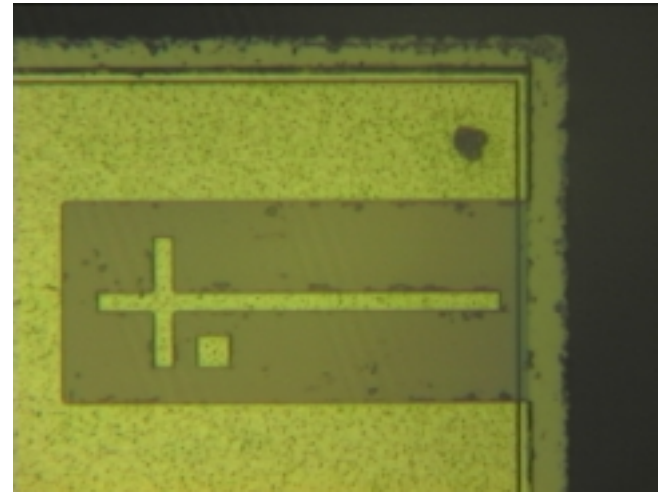


DICING MEASUREMENTS

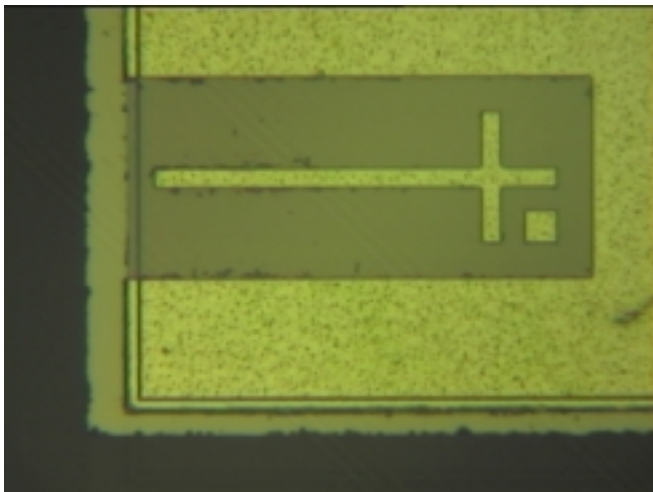
d



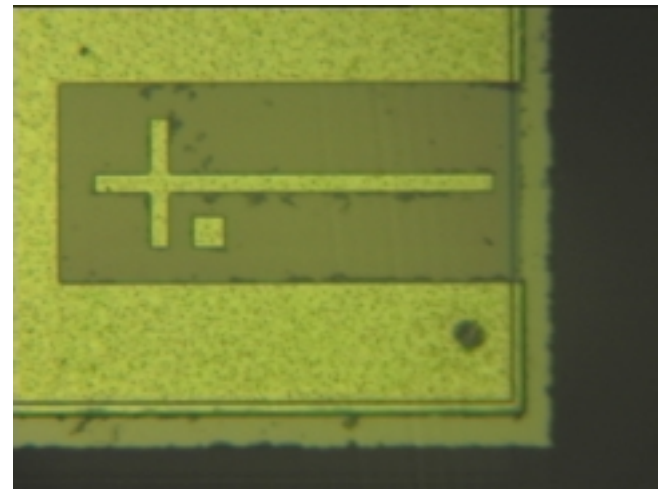
a

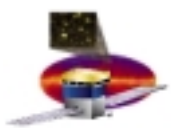


c

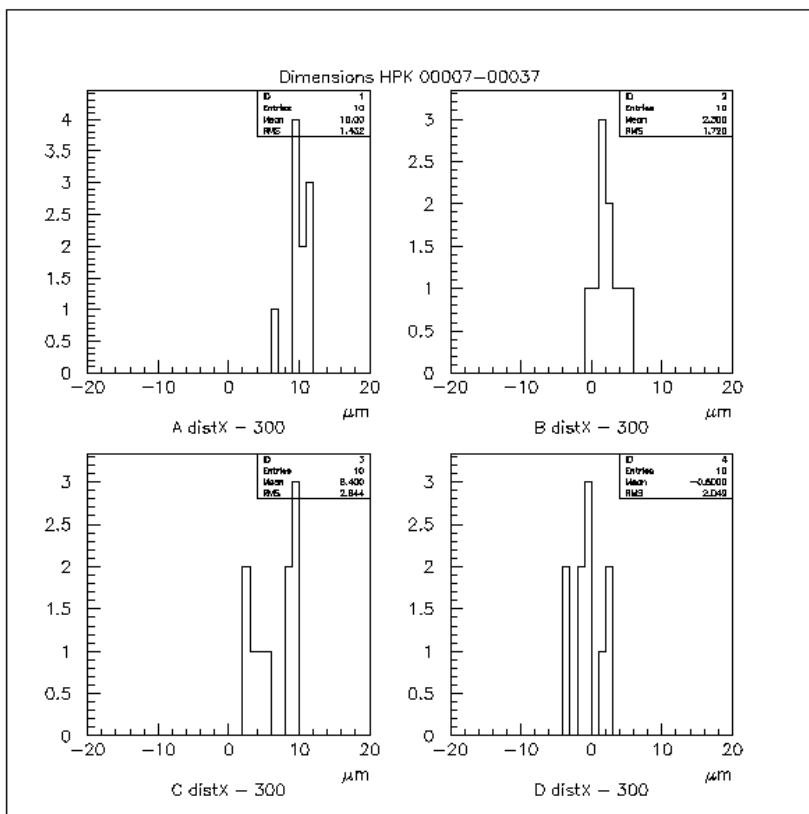


b

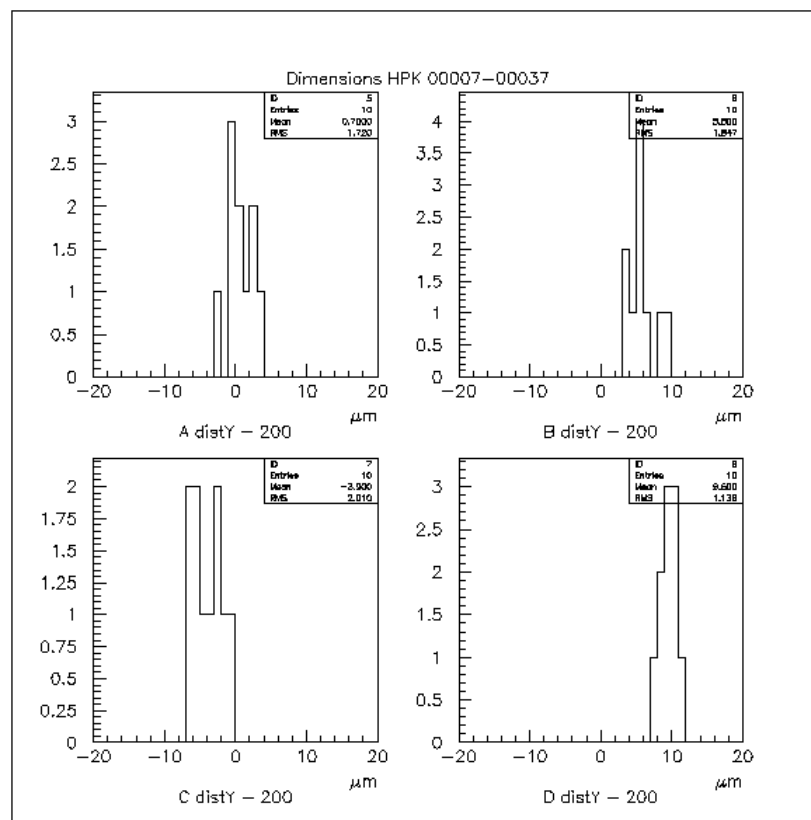




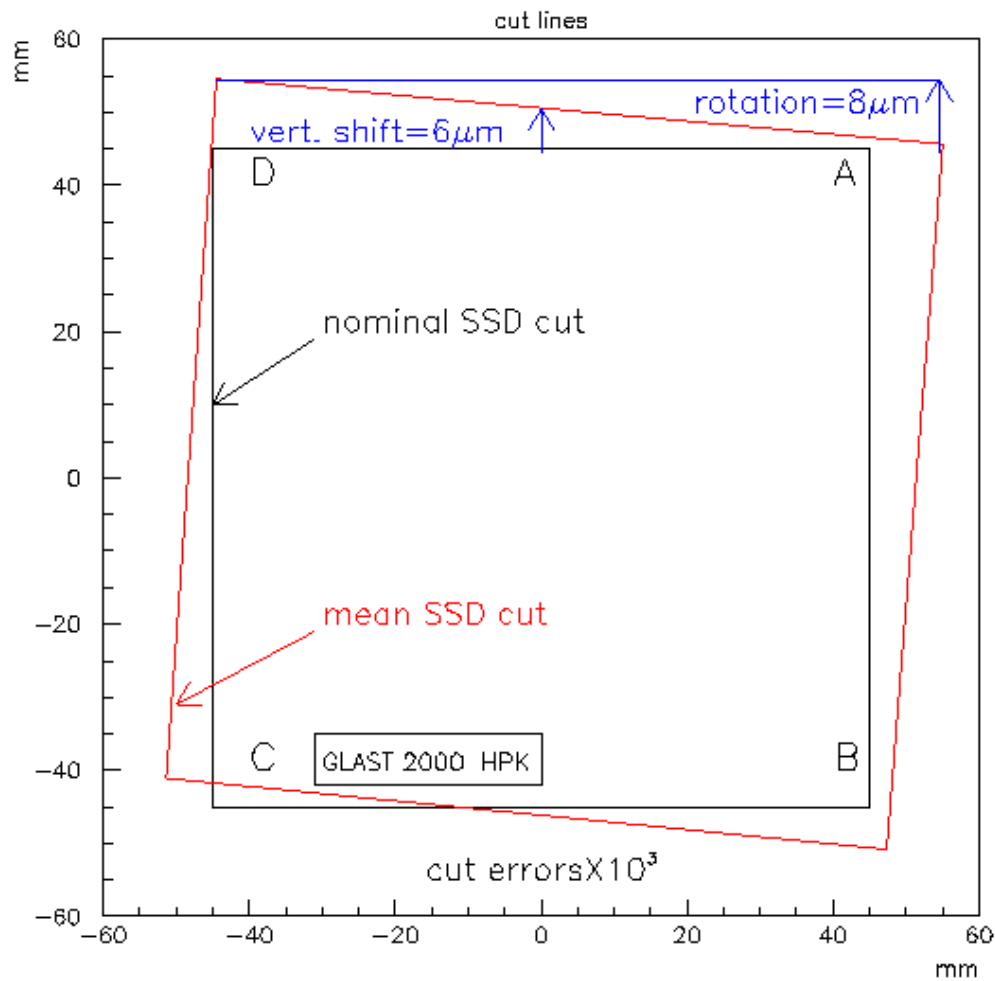
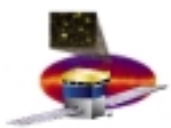
STATISTICS OF THE DICING ERRORS



Front cut orthogonal to the strips



Side cut parallel to the strips



levant measurements for
 sider's assembly:

- = marker_edge dist. - 300 μm
- = marker_edge dist. - 200 μm

quirement :

$$0 \mu\text{m} < \Delta x, \Delta y < 20 \mu\text{m}$$

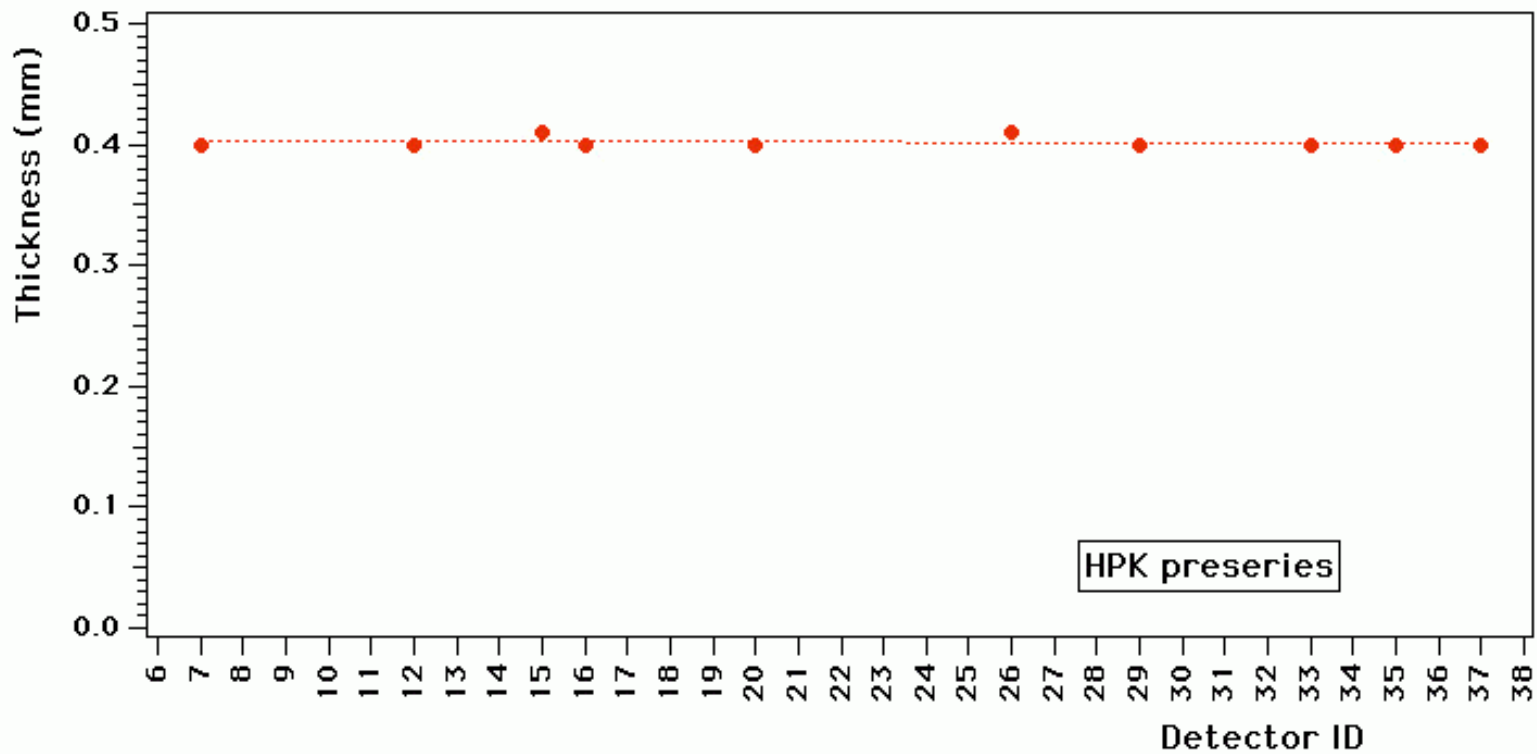
lection parameters

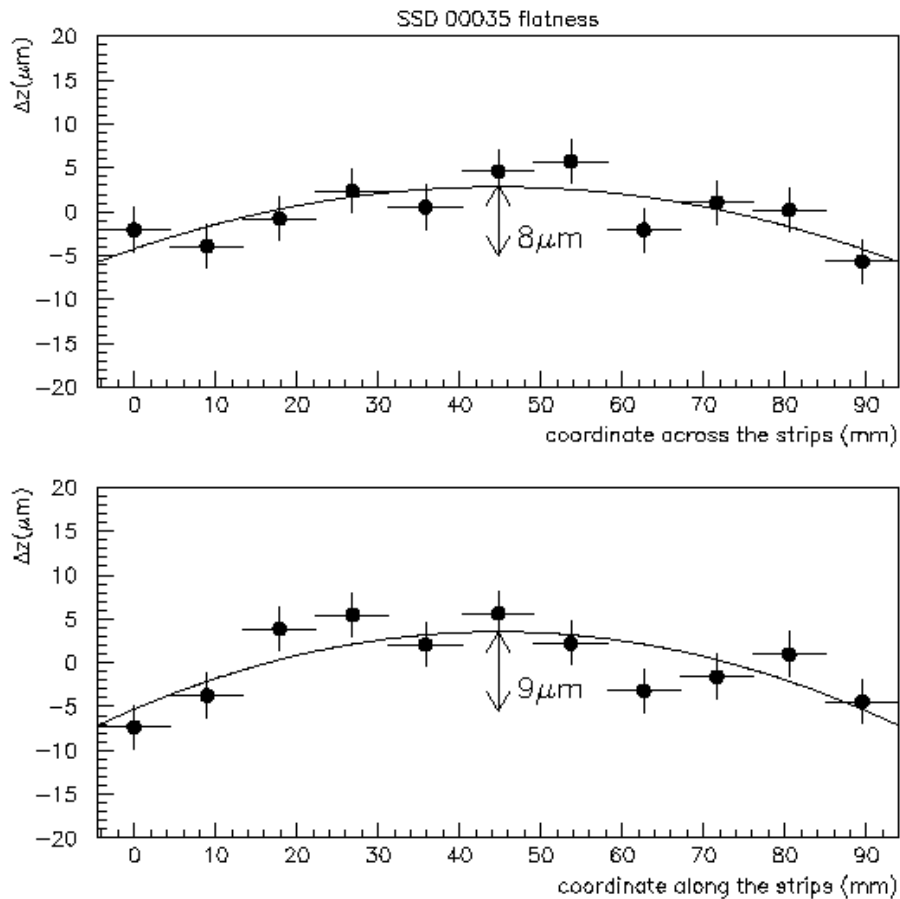
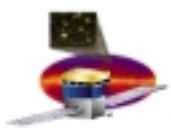
$$\text{ift} = (\Delta y_a + \Delta y_d) / 2$$

$$\text{tation} = \Delta y_d - \Delta y_a$$



WAFER THICKNESS (10 μ m sensitivity measurement)





A moderate bending ($<10 \mu\text{m}$) has been measured on a wafer