



SAPIENZA
UNIVERSITÀ DI ROMA



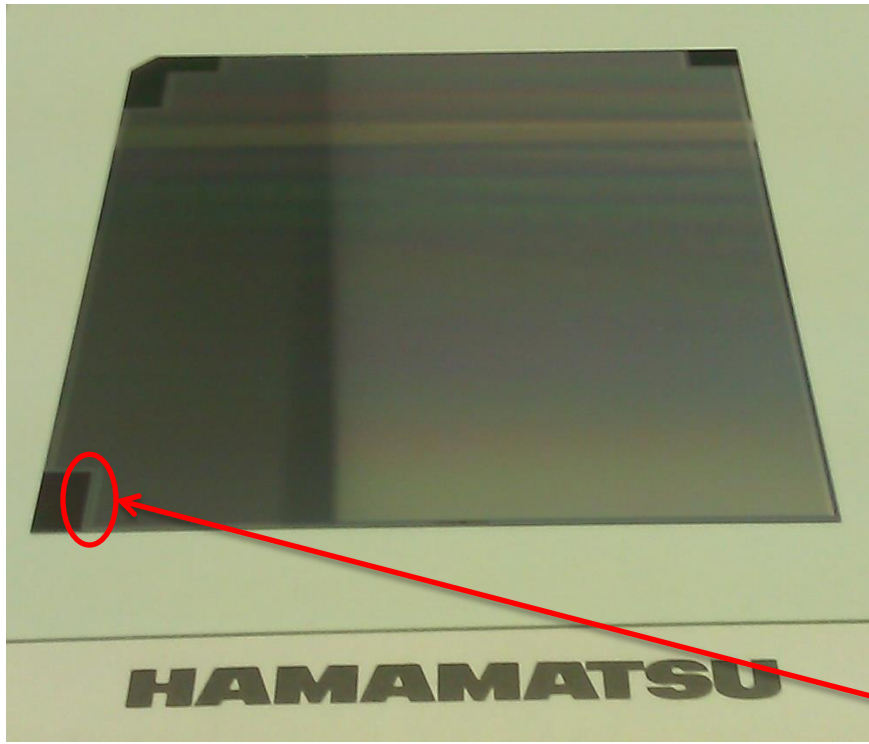
Jefferson Lab



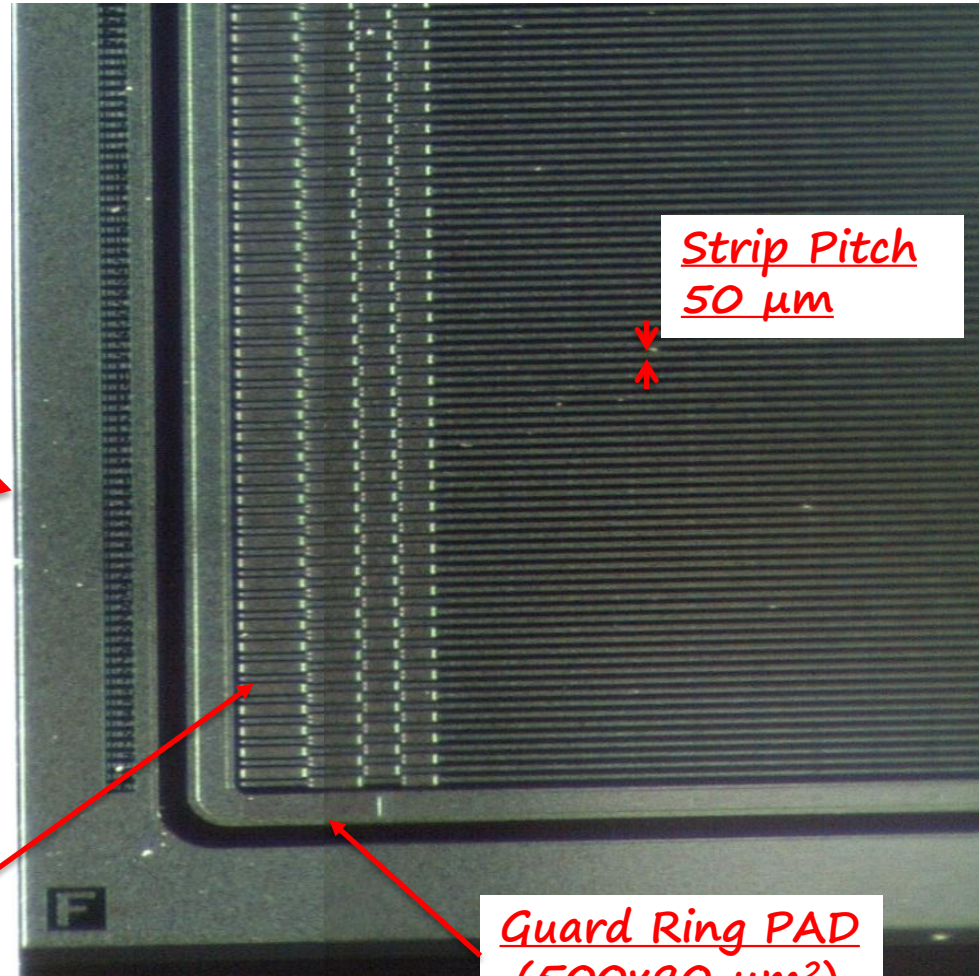
INFN Rome Silicon microstrip Detector for SBS

Guido Maria Urciuoli – Fulvio De Persio – Franco Meddi

Silicon Microstrip Detector: Close Up



Silicon Microstrip Detector

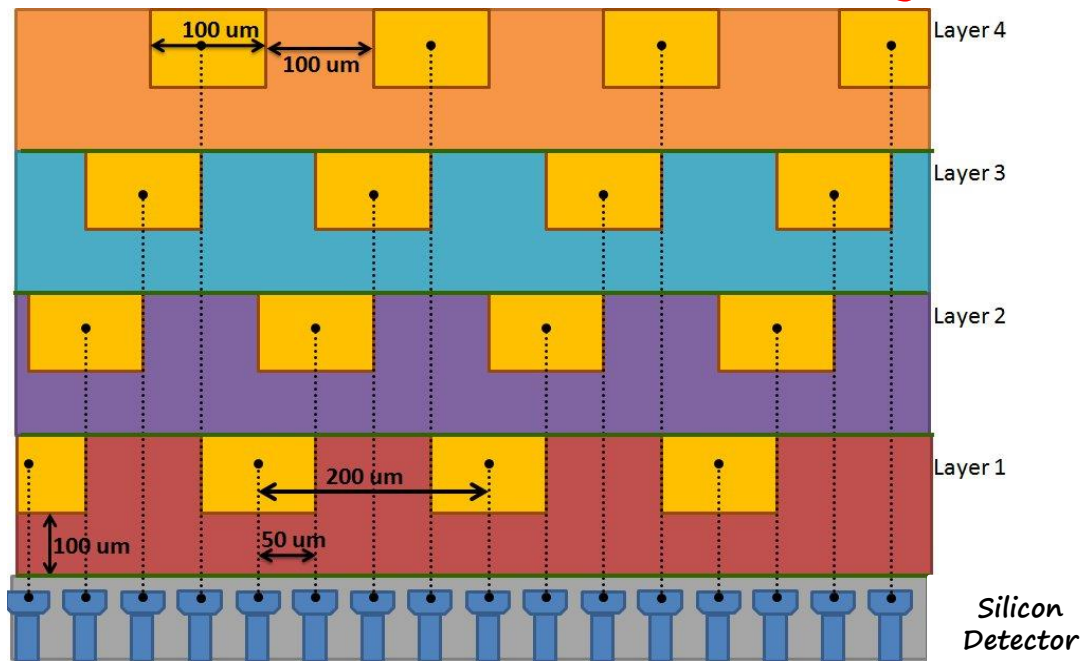


Strip Pitch
50 μm

DC PAD
for bonding
(200x40 μm^2)

Guard Ring PAD
(500x90 μm^2)

4 Layers PCB



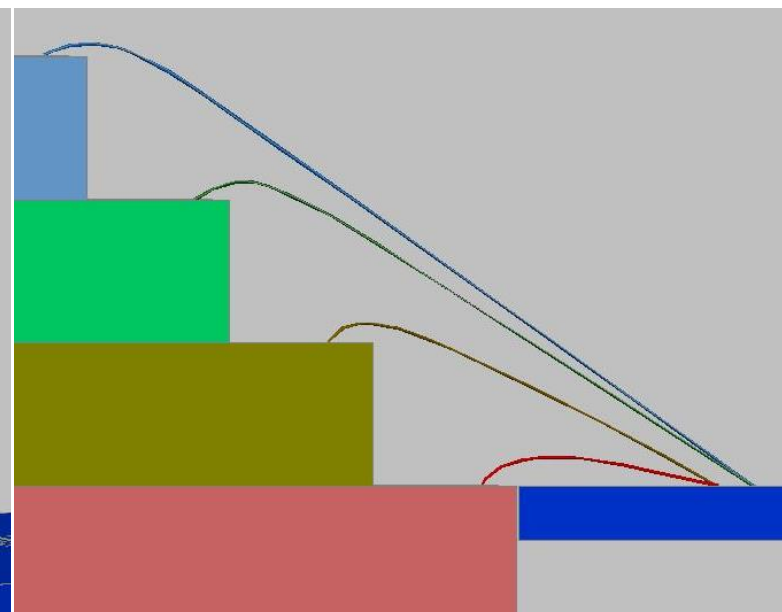
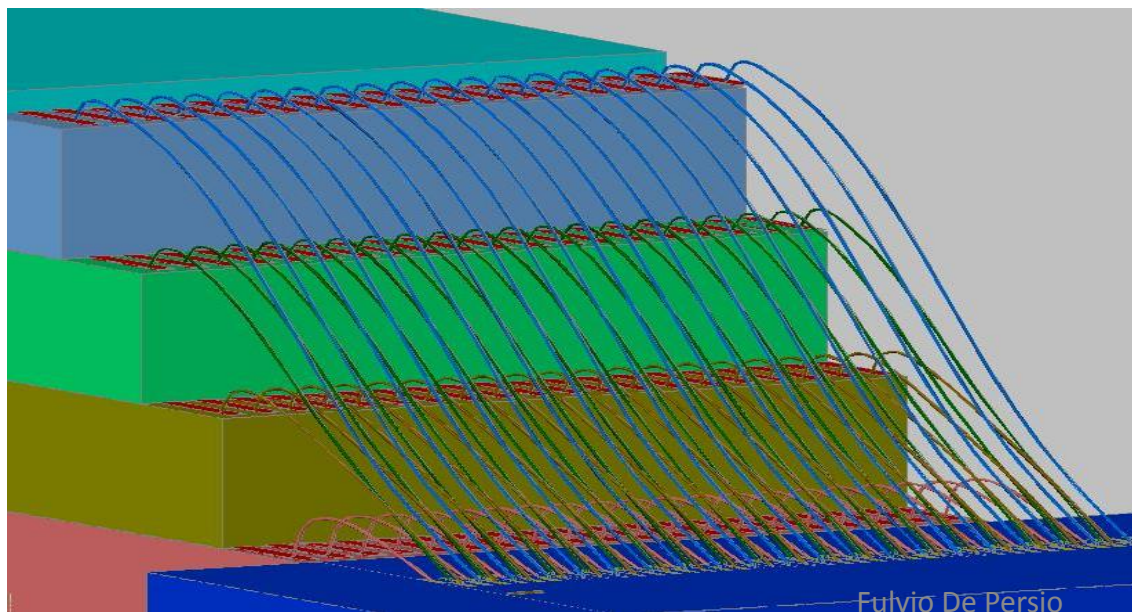
Channels 2070

Layer1 = 518 Ch

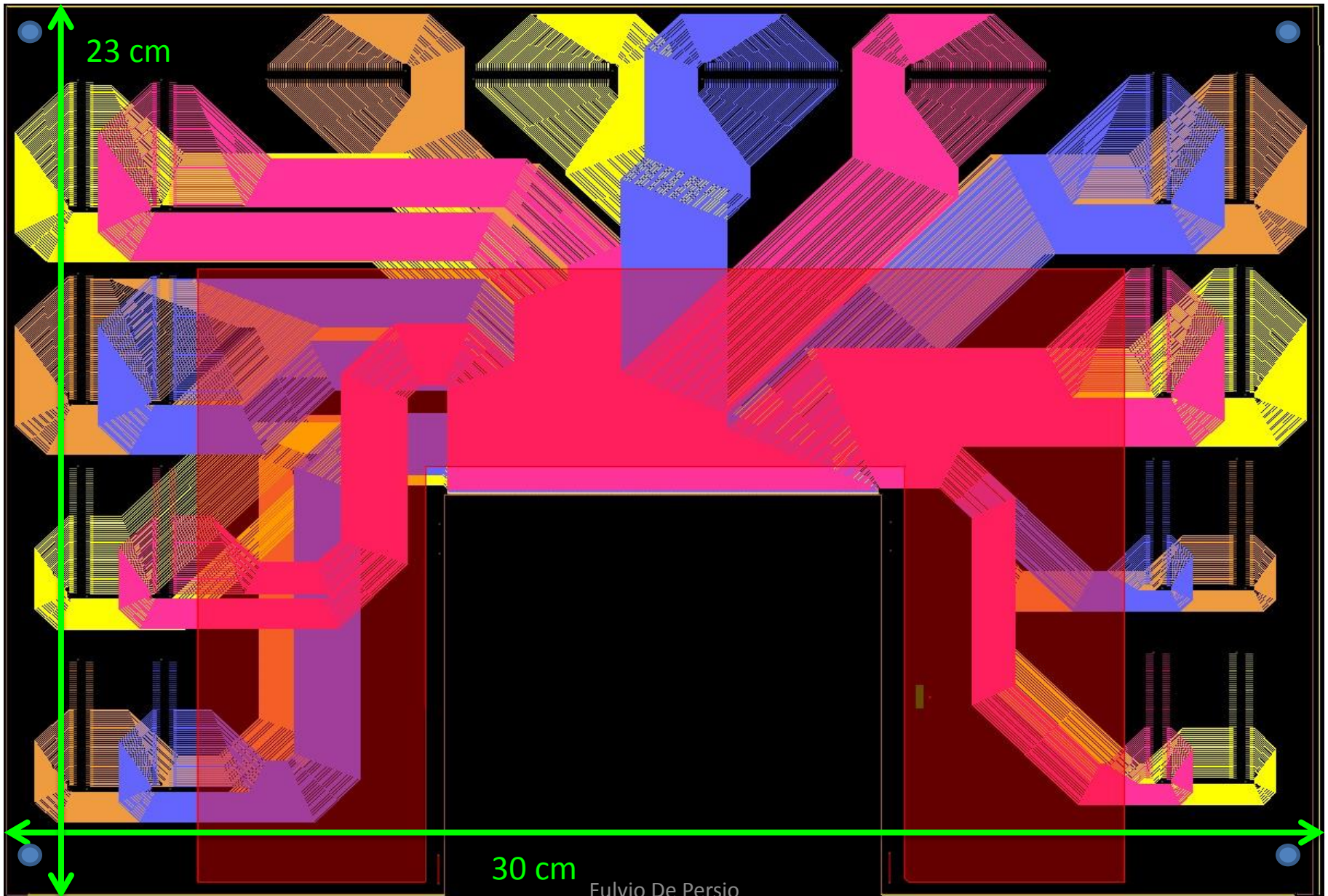
Layer2 = 518 Ch

Layer3 = 517 Ch

Layer4 = 517 Ch

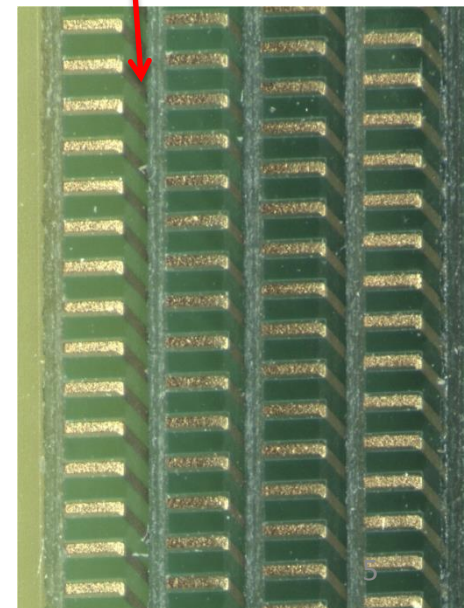
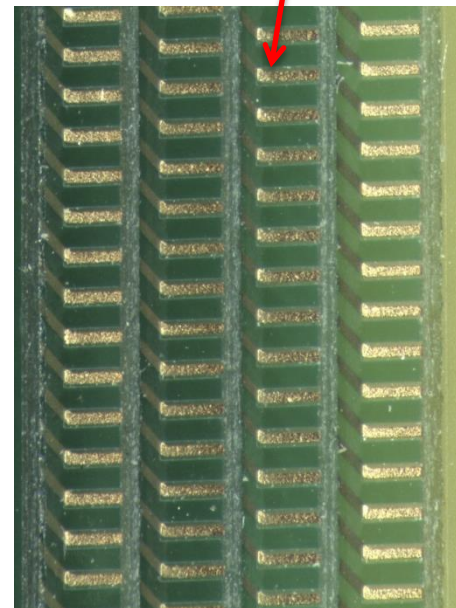
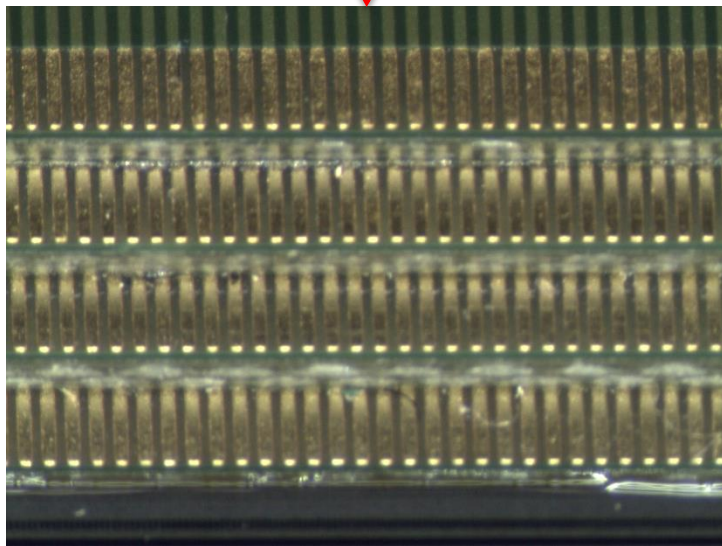
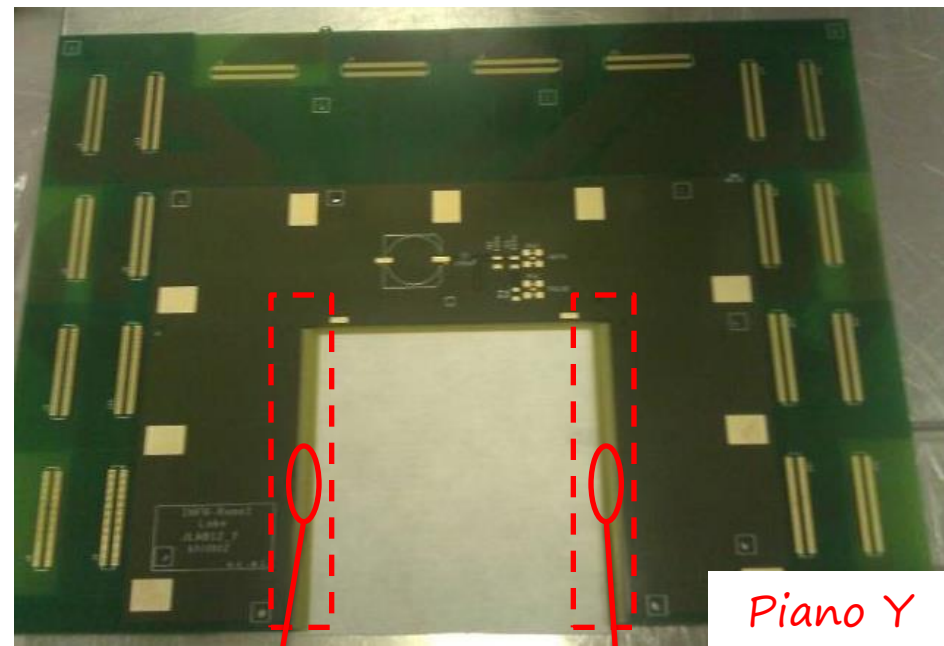
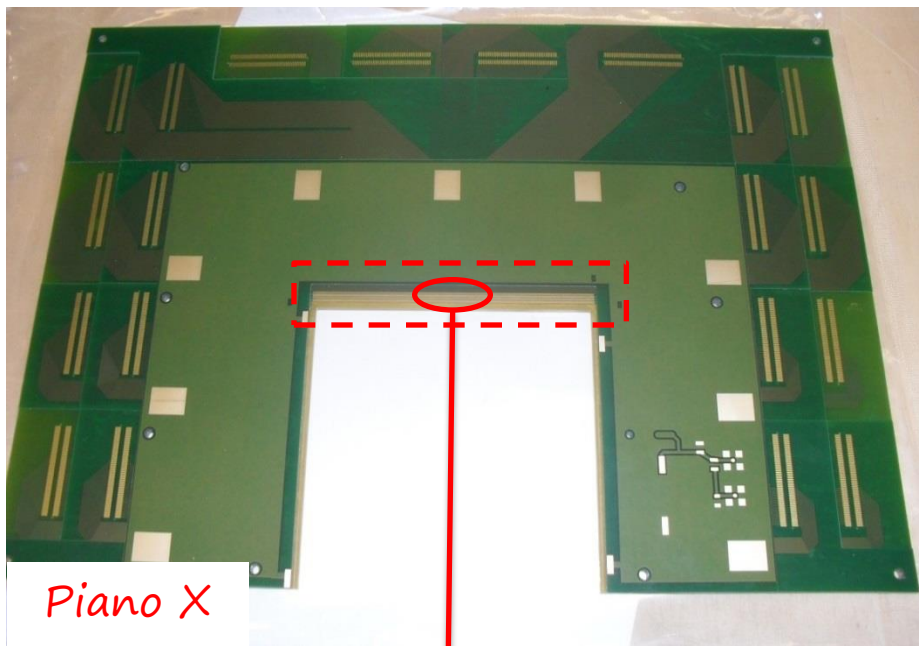


Final Design for Half X Plane PCB

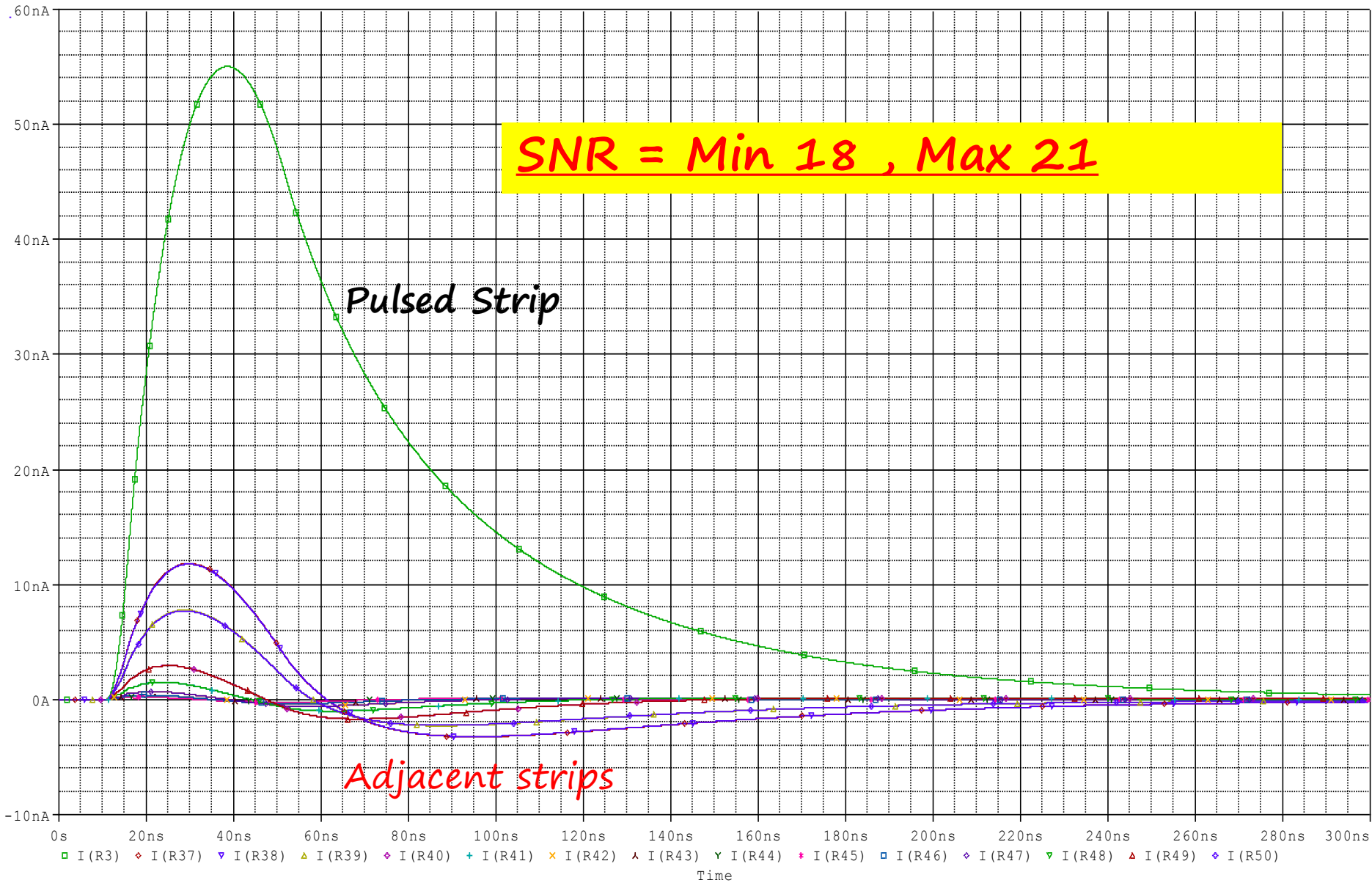


Fulvio De Persio

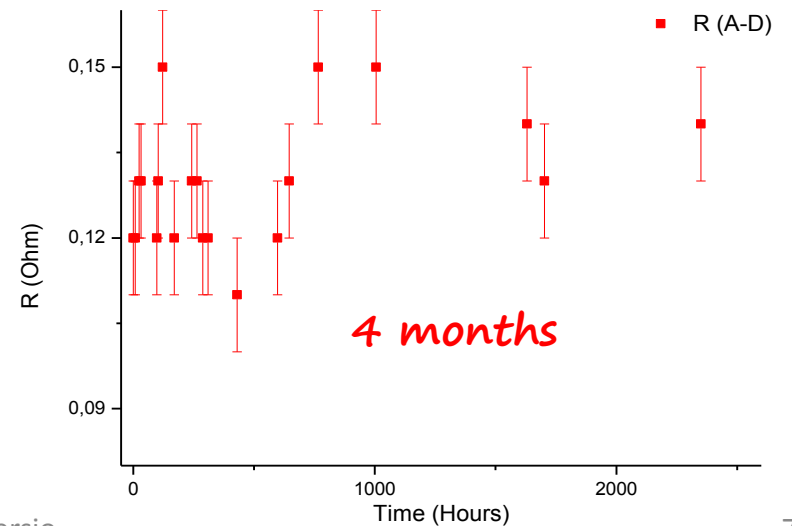
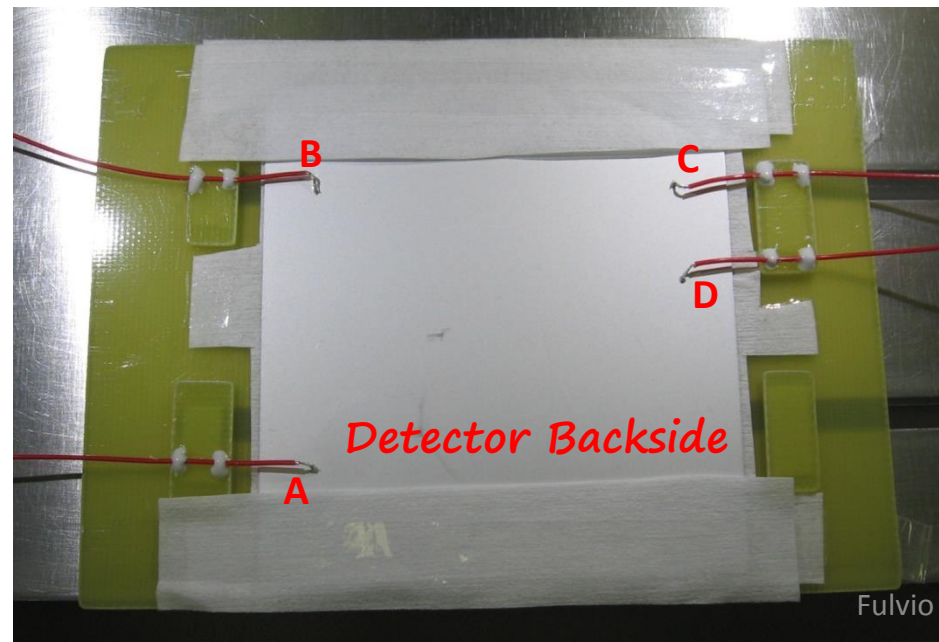
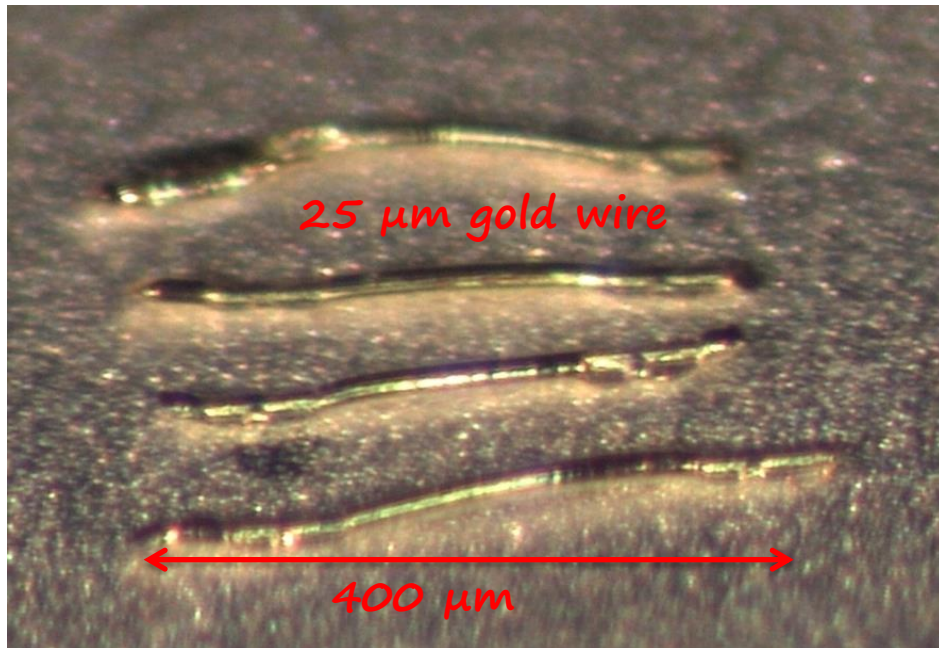
PCB for X plane and Y Plane



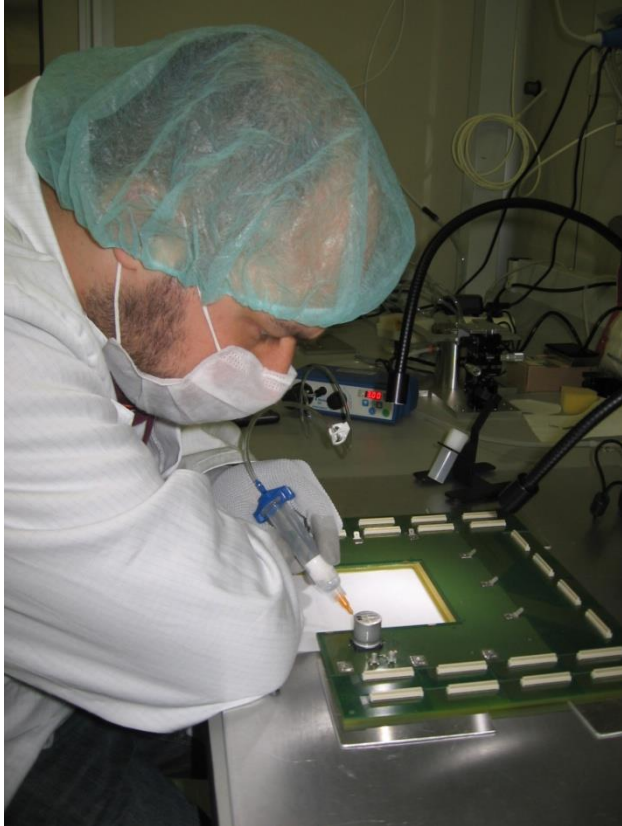
PCB Simulation Result



Test of Golden Wire bonding and conductive glue



Gluing Detector and PCB

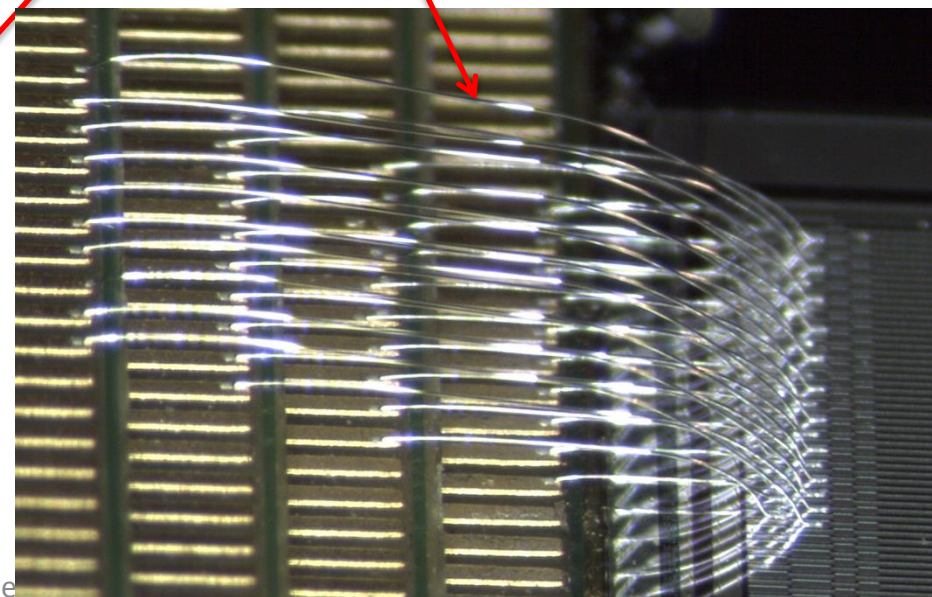
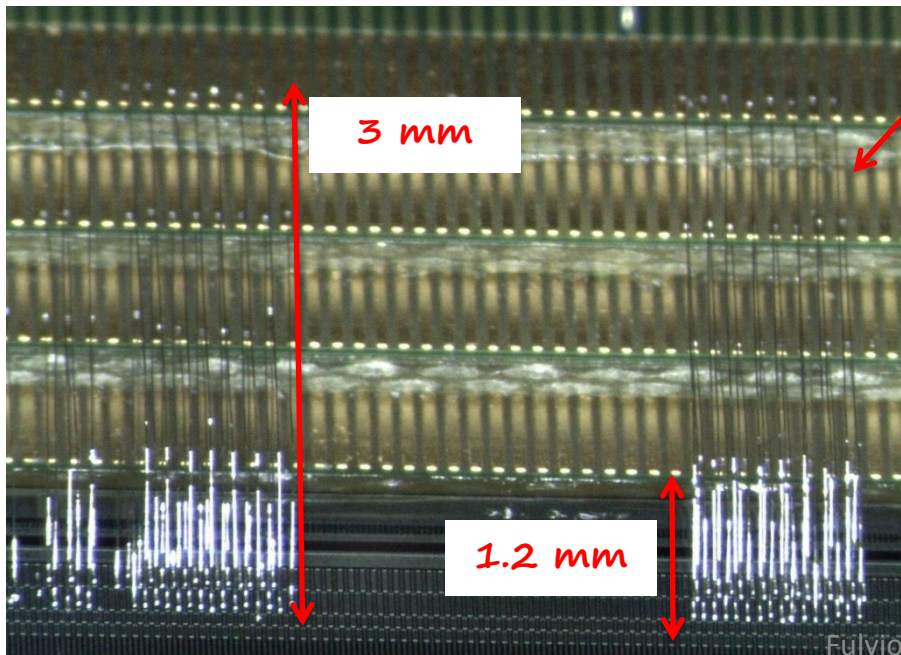
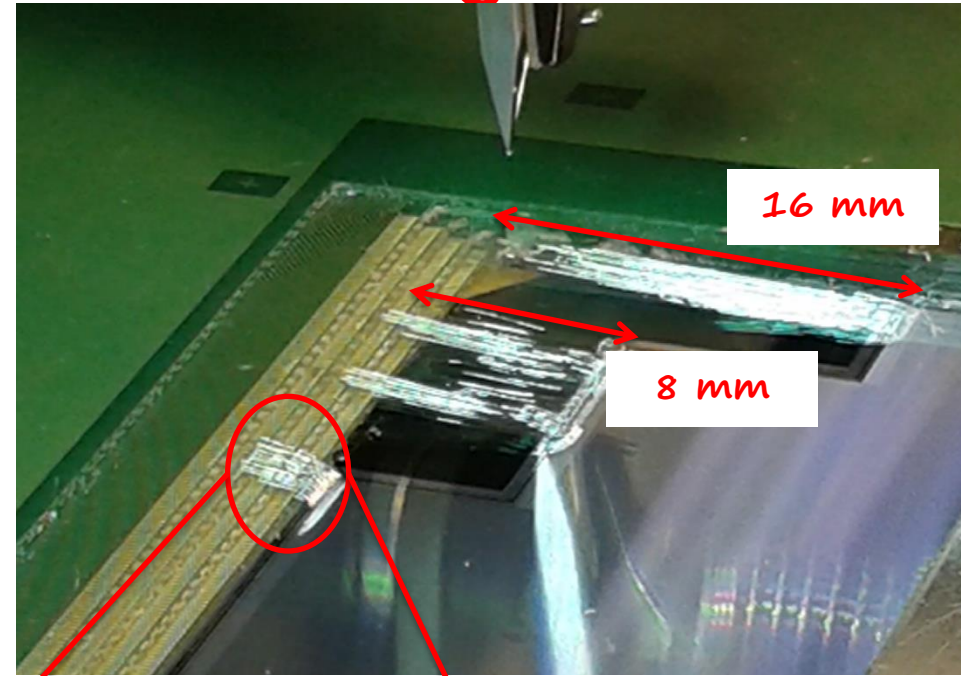
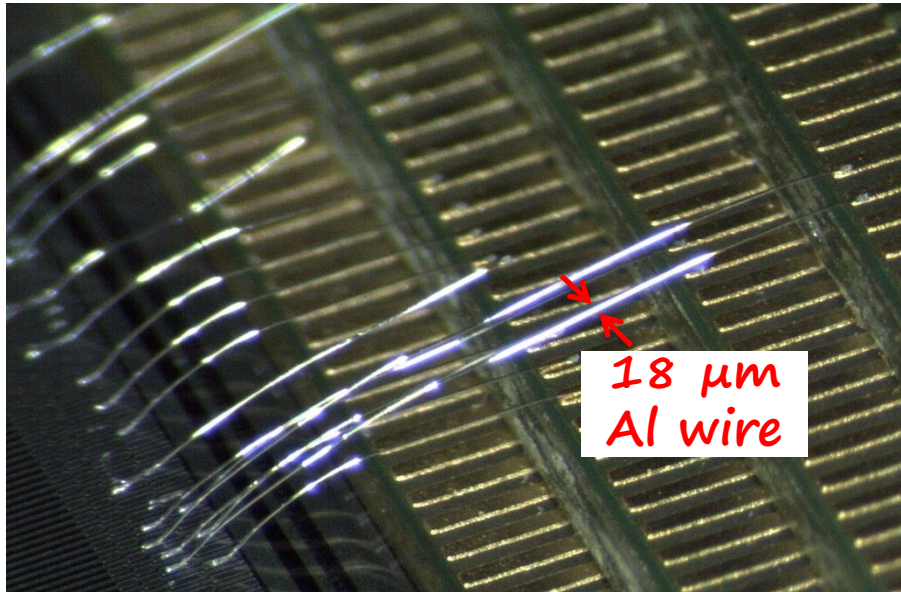


Non-Conductive Glue: Momentive RTV 615

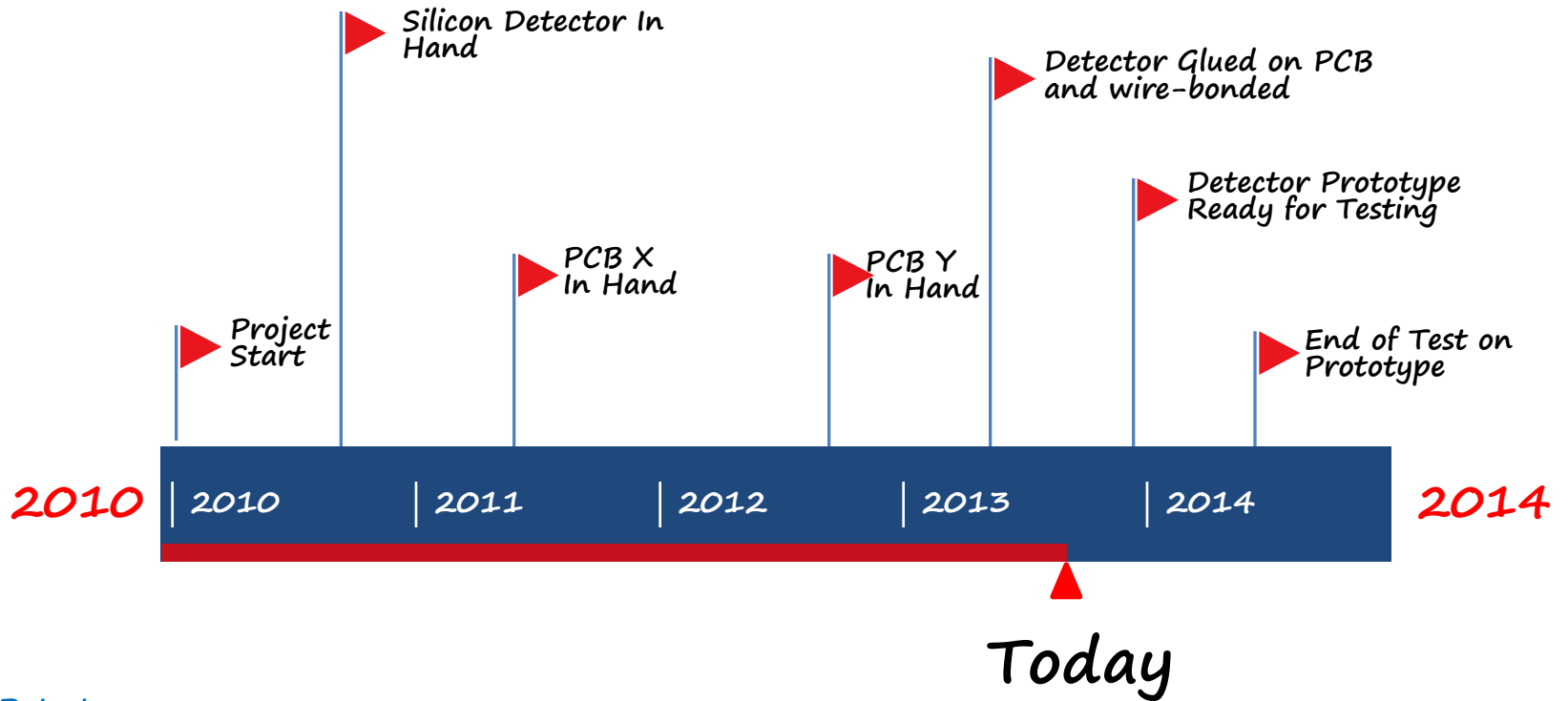
→ After 5h (Glue Curing time at 60 °C) :



Ultrasonic wirebonding



Timeline and Milestones



Simulation (Detector and PCB)



Work on Read Out Electronics



Work on Clean Room



Prototype Assembly



Prototype Test



Plane X and Y Assembly

