

The Silicon Detectors

high track density

50 micron readout pitch

required act. area 5cm 7cm

55 and 52 micron pitch

required stereo angle

2.5 degree rotation

high and inhomog. radiation

polysilicon biasing

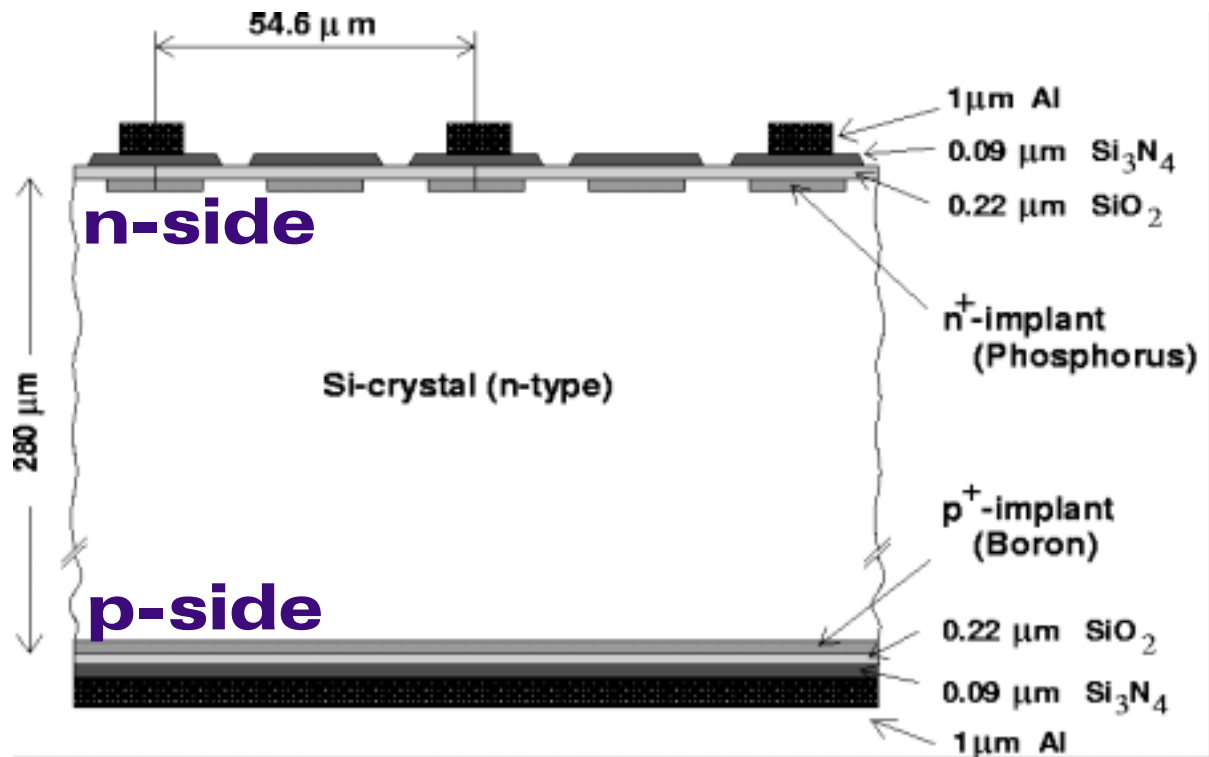
multiple guard rings

burst protection

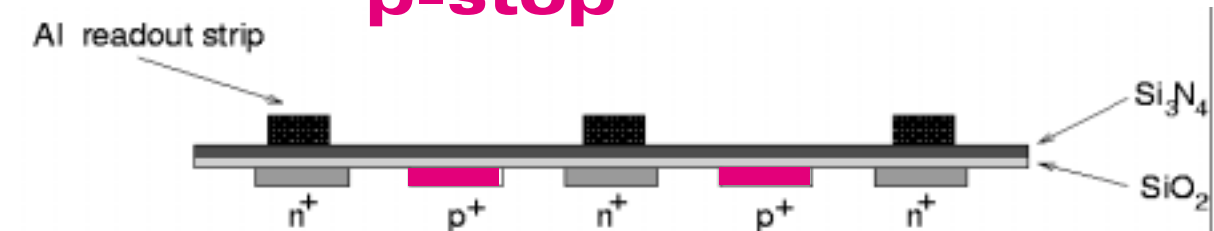
intermediate strips

Resolution is not the issue !

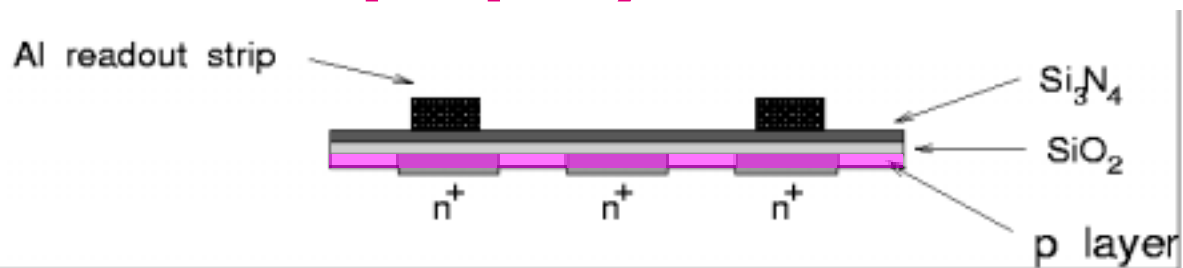
Silicon Technology



p-stop

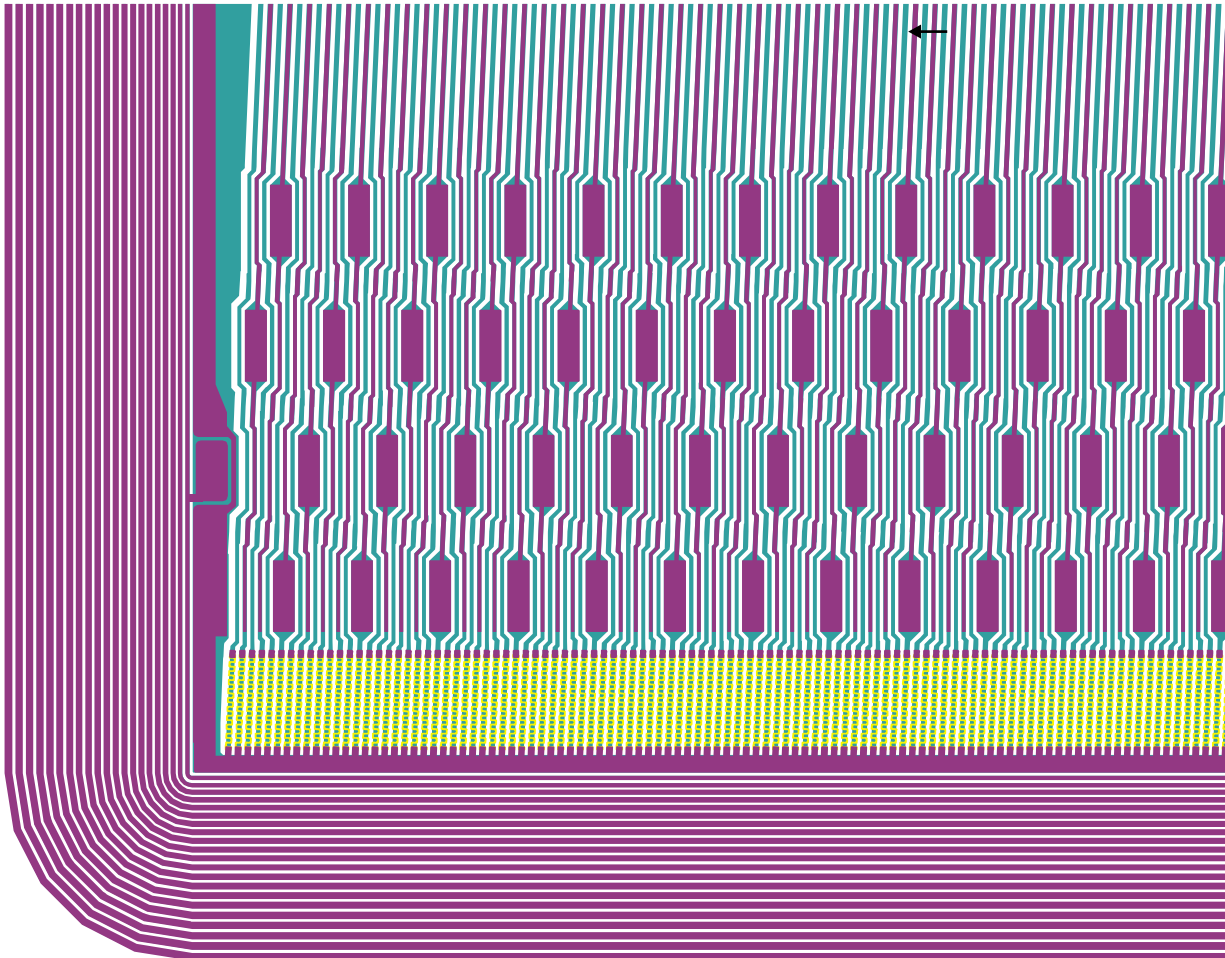


p-spray



Silicon Geometry

n-side



p-spray detector with intermediate strips.

Breakthrough voltage increases with irradiation.

500 Volt and more possible.

Silicon QC

QC done by manufacturer !

**IV curves
strip integrity
strip isolation
polysilicon resistors**

Criteria

**break-through voltage
shape of IV curve
less than 10 bad strips/side
polysilicon 1.2 0.5 M**

**Some cross-checks at the
beginning no problems**

Producers: Sintef/HLL