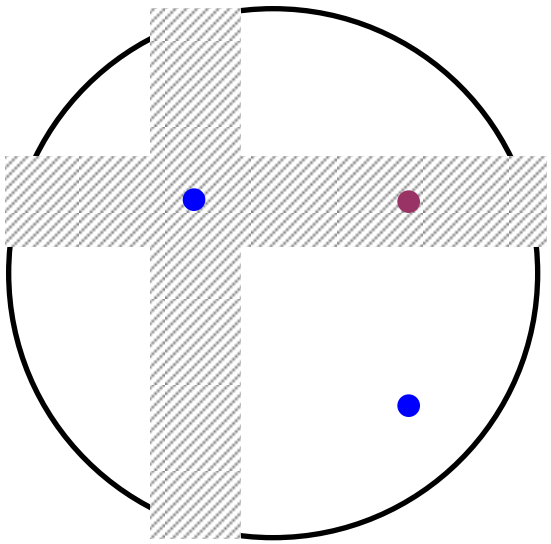
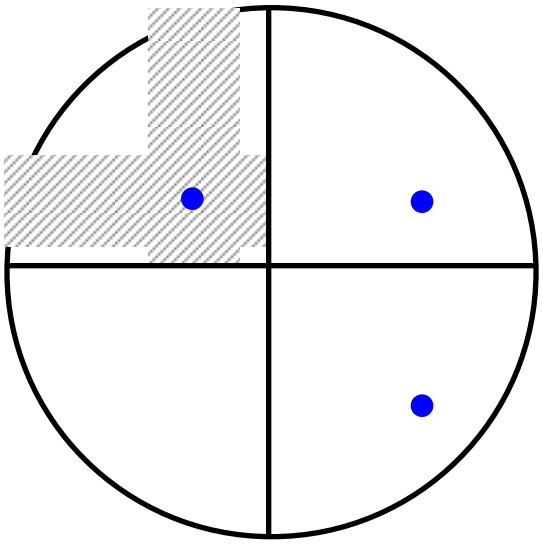
Special DLD Types for Multihits

Multihit problem, dead-time and segmented DLD behavior



DLD with
single anode



DLD with
segmented anode

active DLD area (segmented, not segmented)

dead area for double hit recognition in time

event

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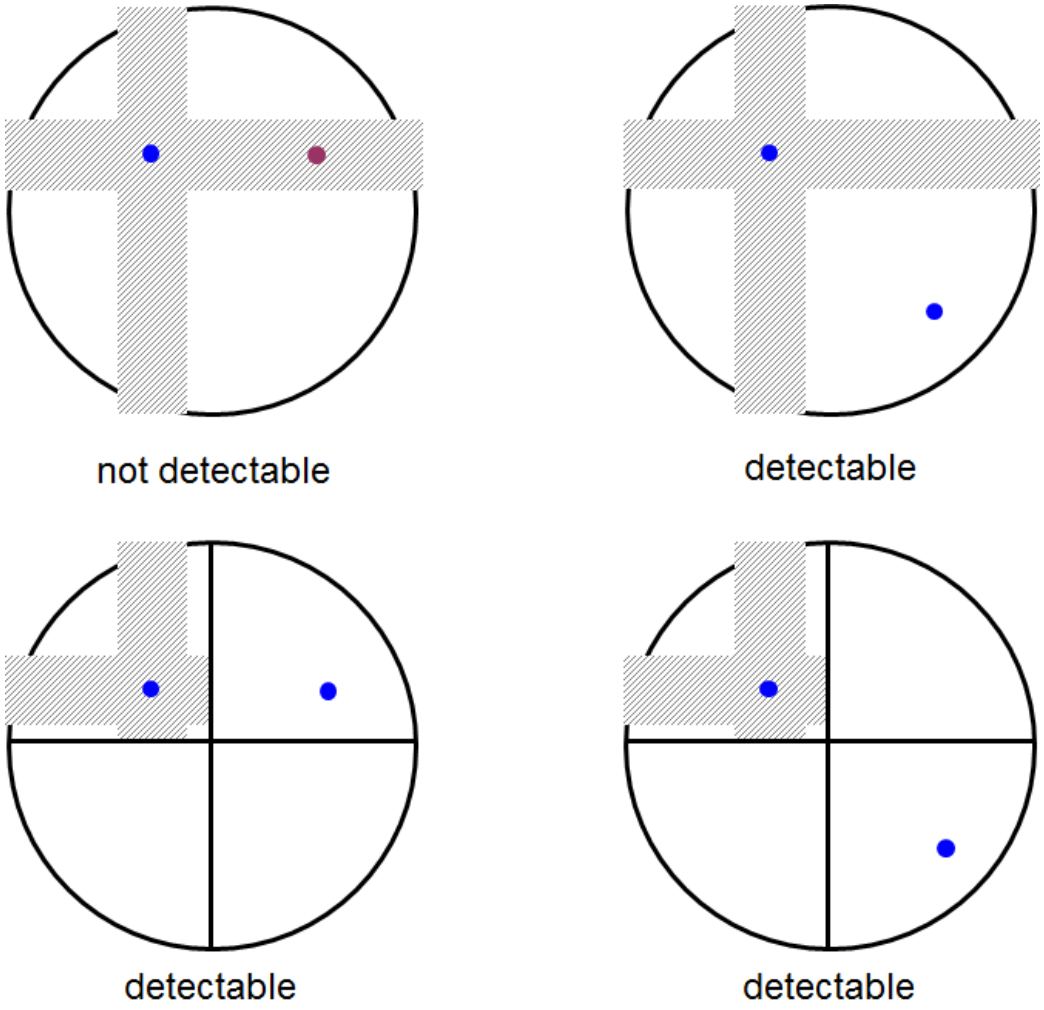
Special DLD Types for Multihits

Multihit problem, dead-time and segmented DLD behavior



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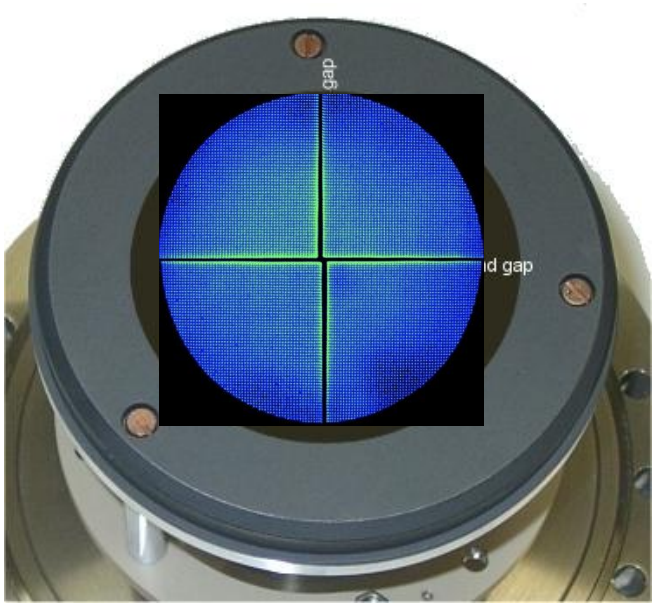
Special DLD Types for Multihits

Special 4 Quadrant DLD layouts

3D-DLD4040-4Q (80 mm diameter) and 3D-DLD3030-4Q (60 mm diameter):
4 fold segmented DLD using 4 independent DLD readout systems in parallel
each segment has low dead times (15 ns DLD4040-4Q / 9 ns DLD3030-4Q)



- Multi-hit 2D/3D 4-fold delayline detector
- Up to 4 multi hits with absolutely zero dead time
- Up to 400 multi hits per 1 µs
- Burst rates above 100 MCPS equivalent
- 60 x 60 mm² (or 80 x 80 mm²) active area of DLD body and ∅ 80 mm active MCP area
- Down to 30 µm of pixel size
- < 250 ps over all time resolution
- Linear response due to single event counting
- Extremely low dark count rate: ≤ 0.2 cps/ cm²
- Up to 40 MCPS random hit rate in 2D/3D mode

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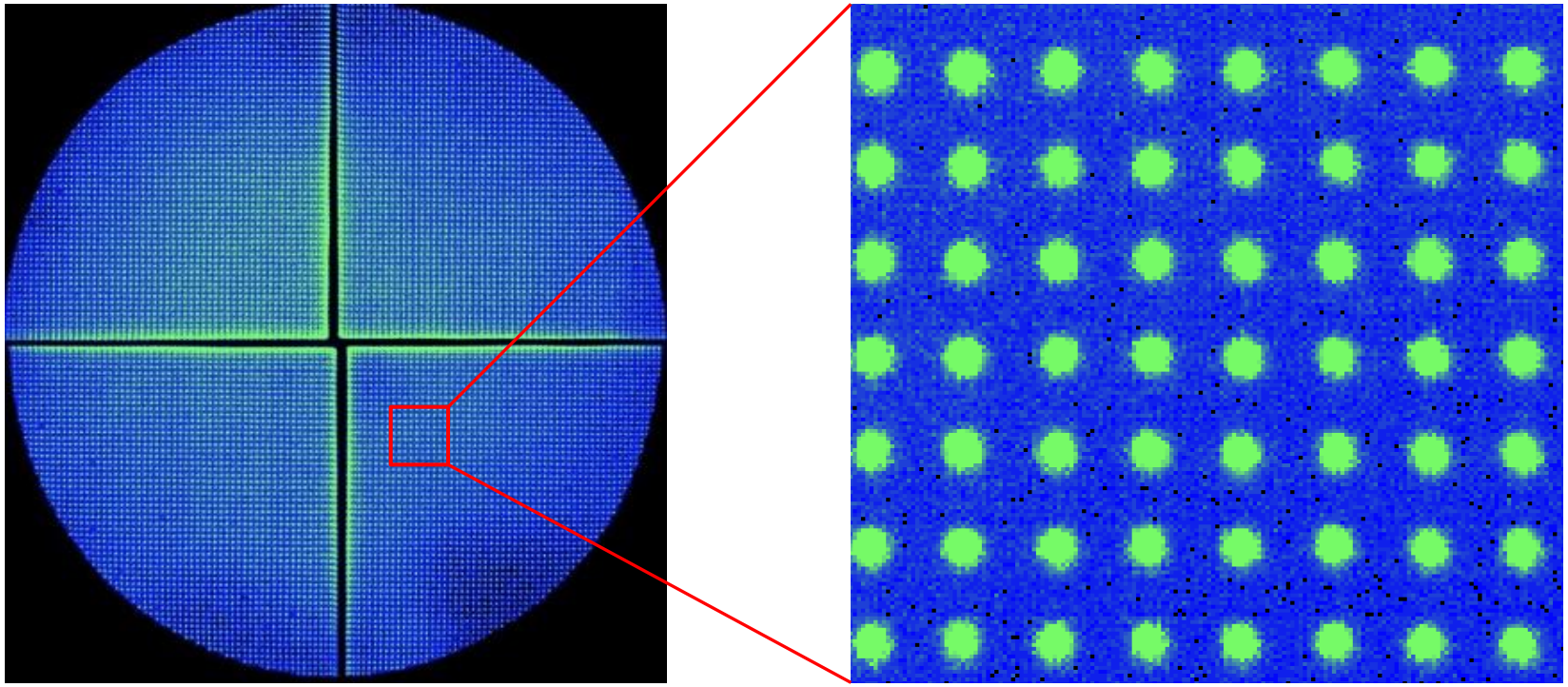
DLD – 4Q Performance

Special 4 Quadrant DLD layouts

3D-DLD4040-4Q:

grid mask measurement with 0.7 mm pitch and 0.2 mm holes



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