ISIS
Testbeam Plans

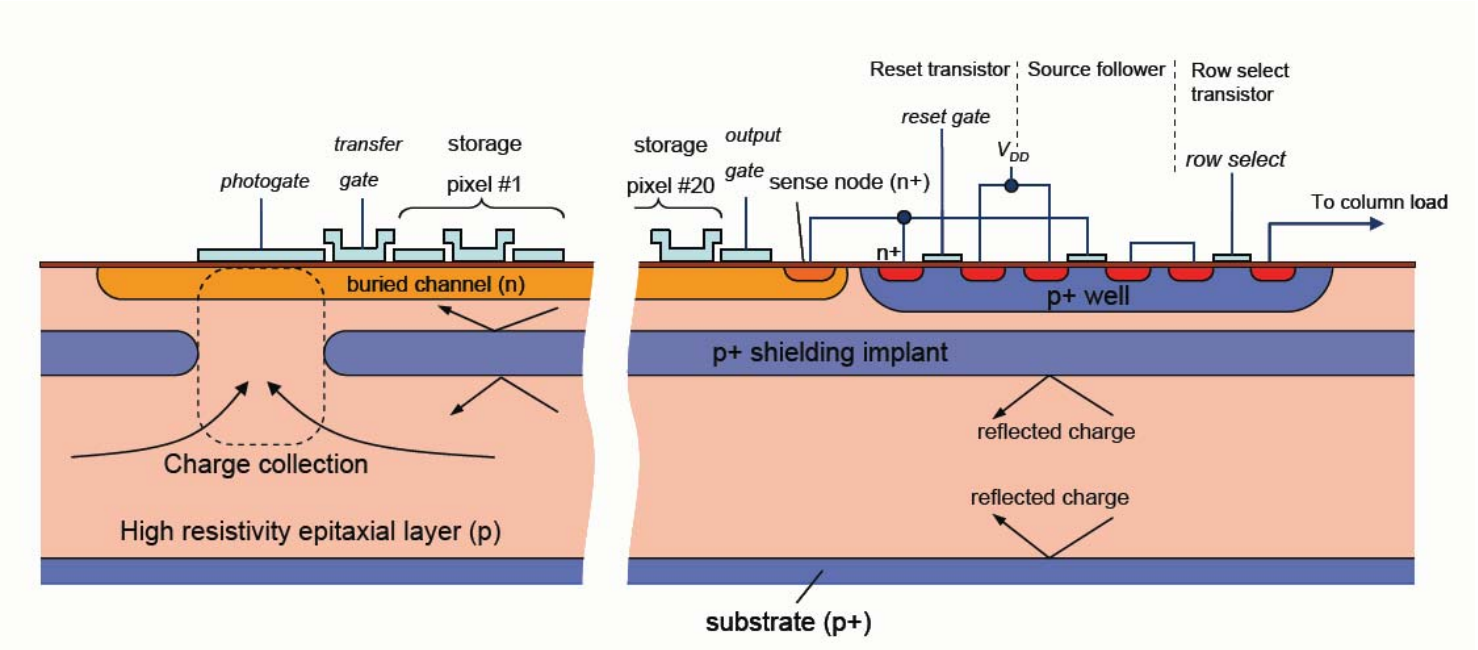
David Cussans, Geneva, May 2008

Outline

- Introduction
  - ISIS concept
  - ISIS1
- DESY Test-beam 2007 (stand-alone)
- CERN Test-beam 2008

ISIS Concept

- MAPS device with CCD-like features
- Designed for “burst-camera” applications



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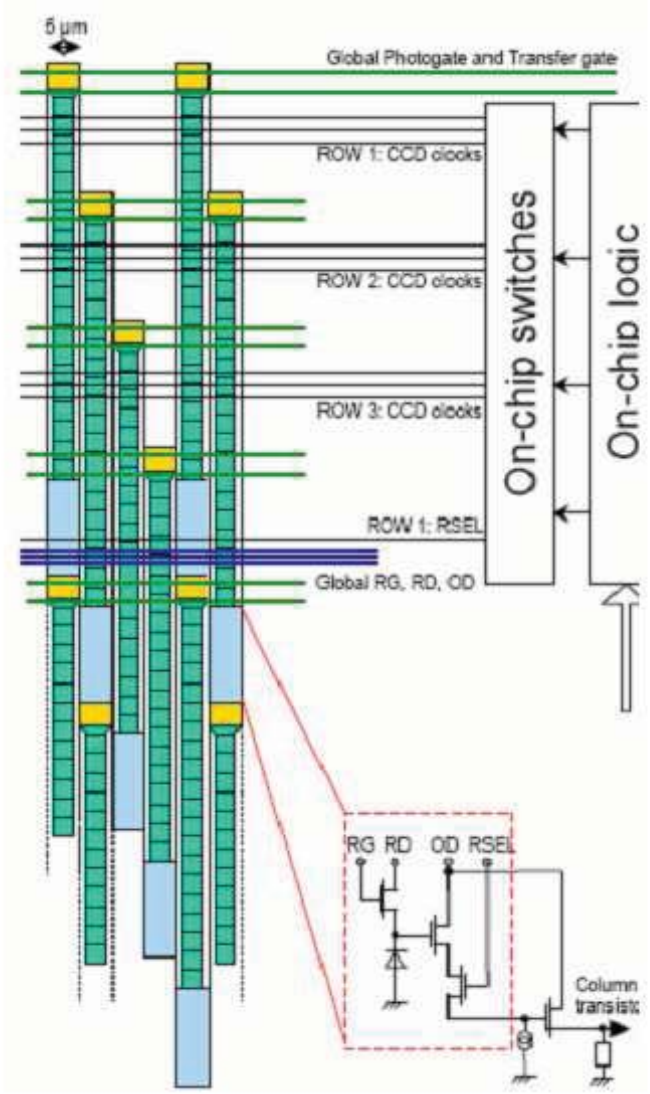
ISIS1

- "Proof of principle" implementation
  - Very little on-chip logic (basically a CCD process)
  - Five not twenty storage cells per pixel.
  - Variants with and without "p-well" shield

ISIS1



- Current pixel is "long and thin"
- Very large pixels: 40um x 160um
- 16 x 16 array

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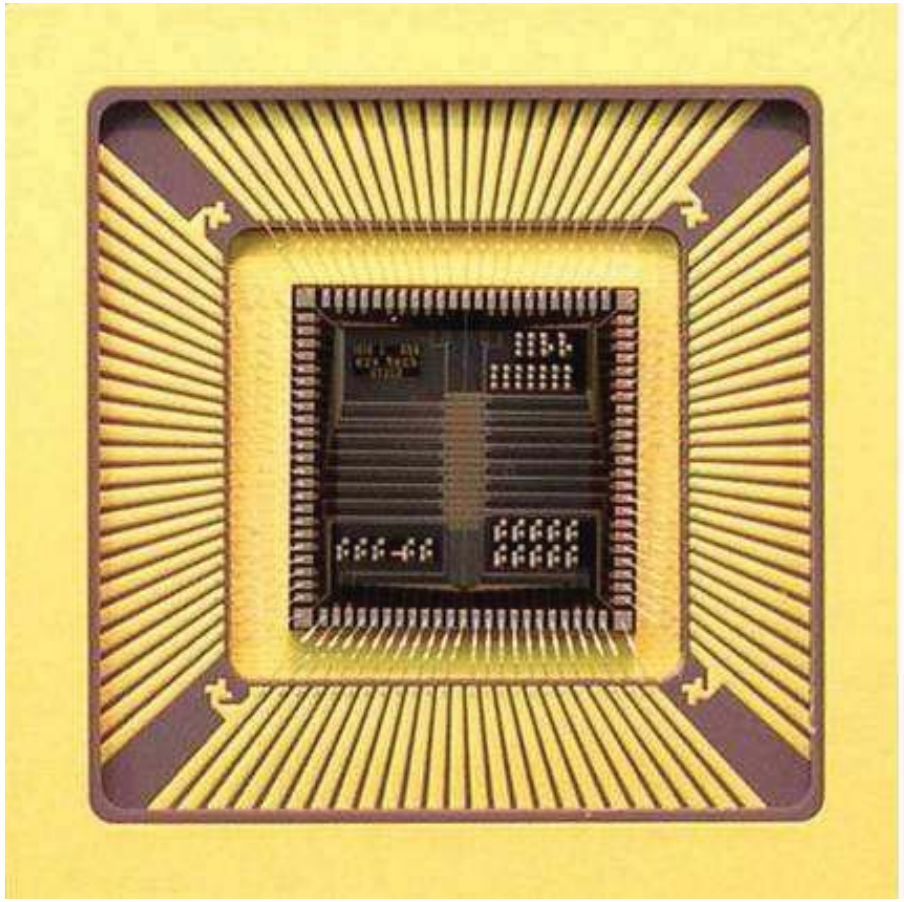
ISIS1

- Die mounted in PGA package with hole cut for beam



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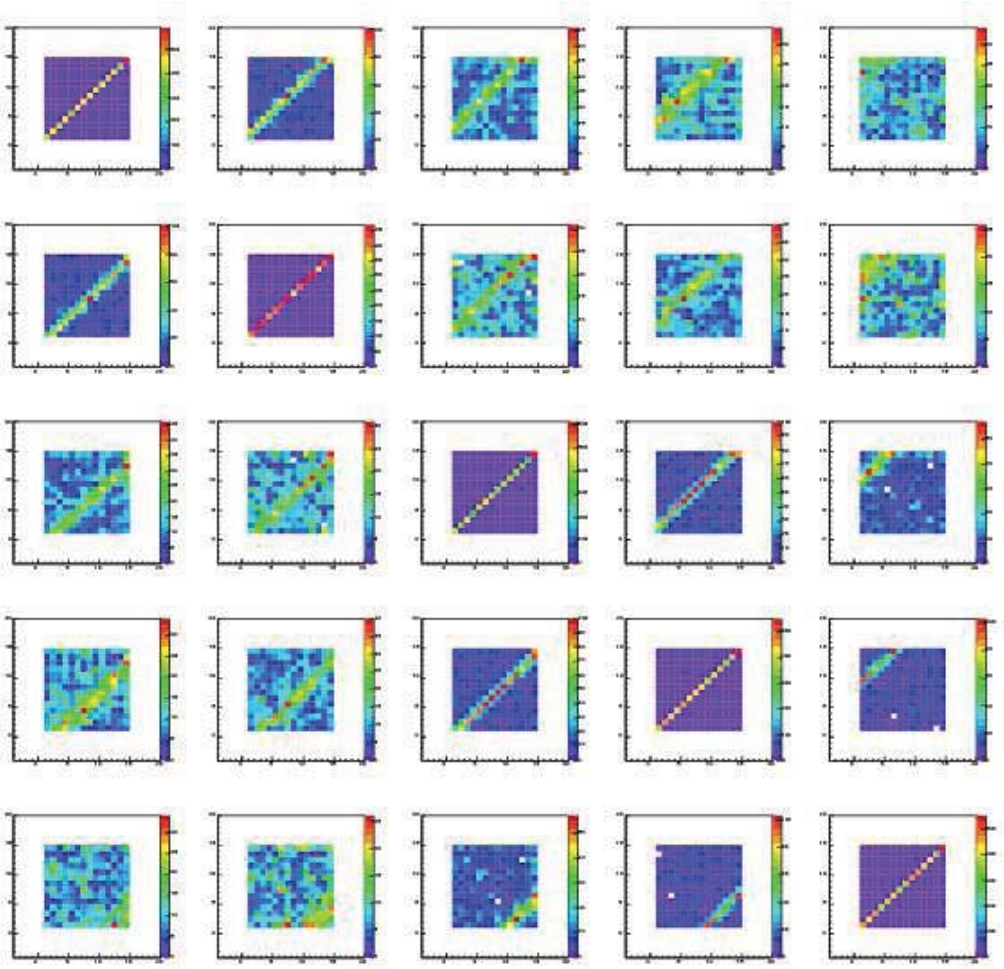
DESY Testbeam

- Tested stack of five ISIS1 at DESY
- See correlations (I.e. tracks)



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CERN Testbeam

- Self contained telescope @ DESY provided useful information.
- Want to run at CERN with high precision telescope and high momentum beam
  - Charge collection efficiency, charge sharing, hit-efficiency as function of position
  - Use “p-well variant” ISIS

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