

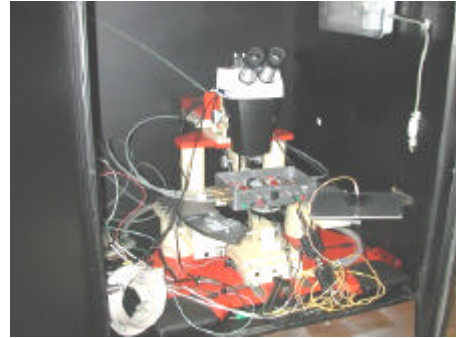
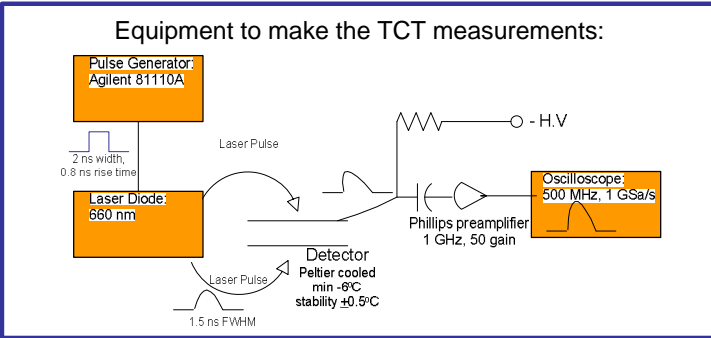
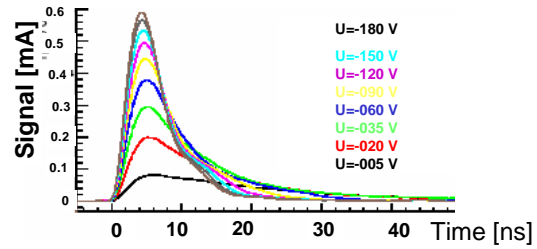
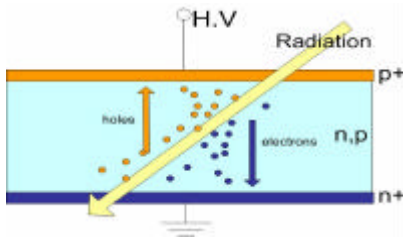
Transient Current Technique

Alison Bates, Michael Moll

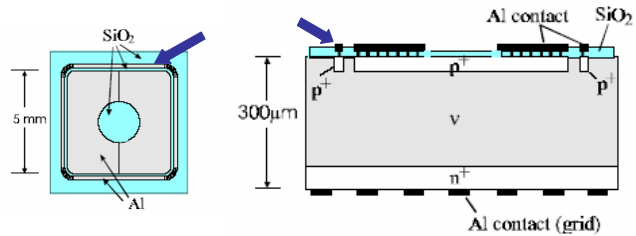
TCT Analysis provides information on:

- Electric field formation
- Effective trapping time
- Charge collection efficiency
- Full depletion voltage

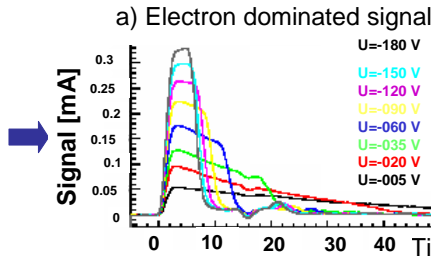
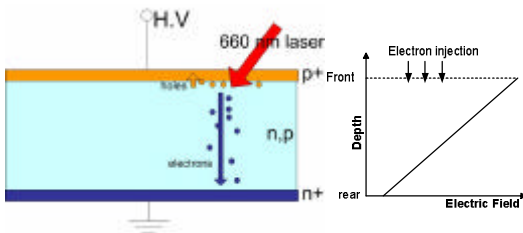
• Normal detector operation:



Test structures used to characterise the material:

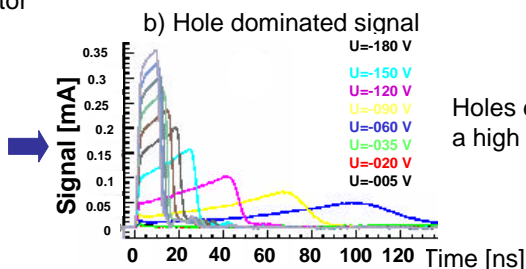
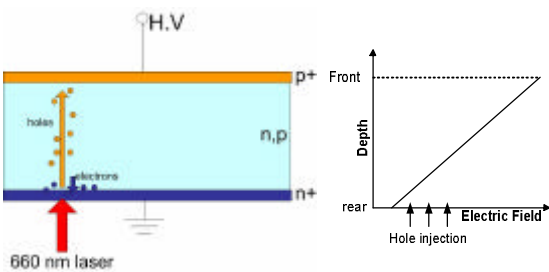


• 660 nm Red laser illuminates the front of the detector, penetration depth ~few μm



Electrons drift from a high to a low electric field

• 660 nm Red laser illuminates the rear of the detector



Holes drift from a low to a high electric field