Laser Data from Oxford

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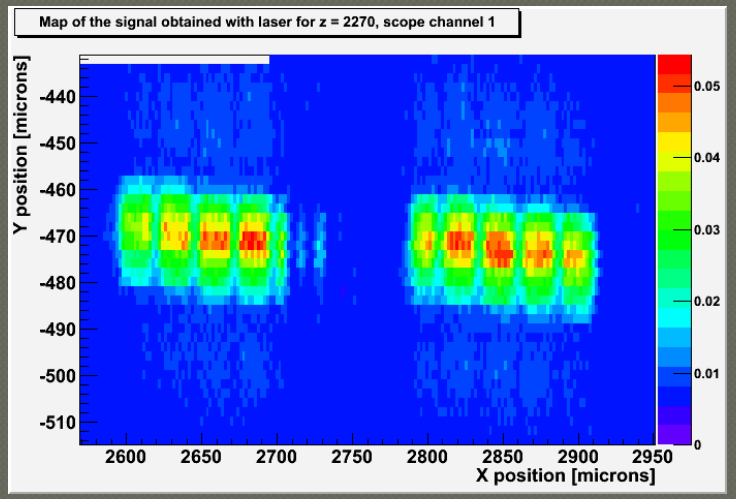
Infrared Laser on HVStripV1

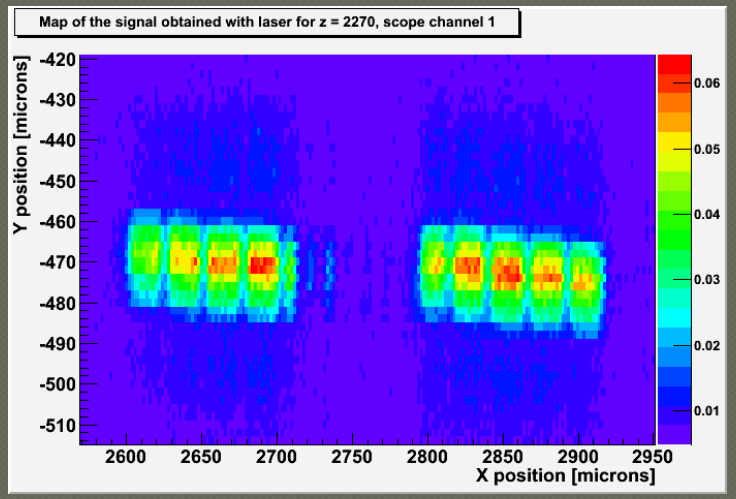
- Infrared laser (1060 nm)
- Pixel (10,0), enclosed transistor
- Absorber on laser and power to 72.5%
  - This to reduce the signals at level of Iron55
- Bias scan
- VNBF set to 60
  - Low noise
  - Short pulses (400ns)

Signal Maps

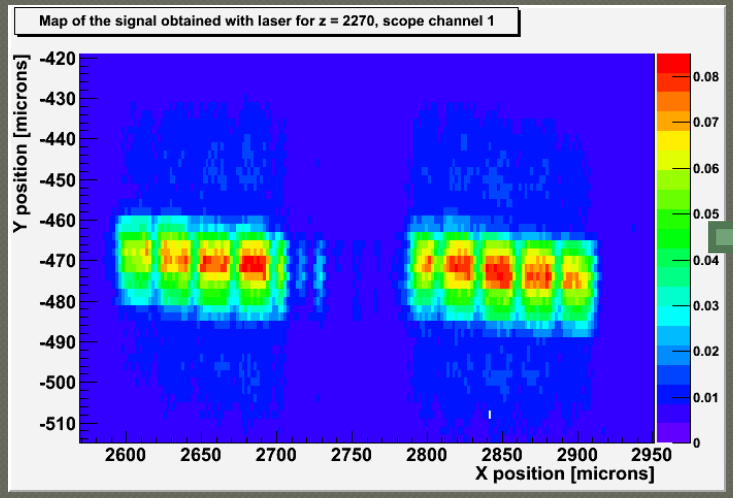
Bias 10V



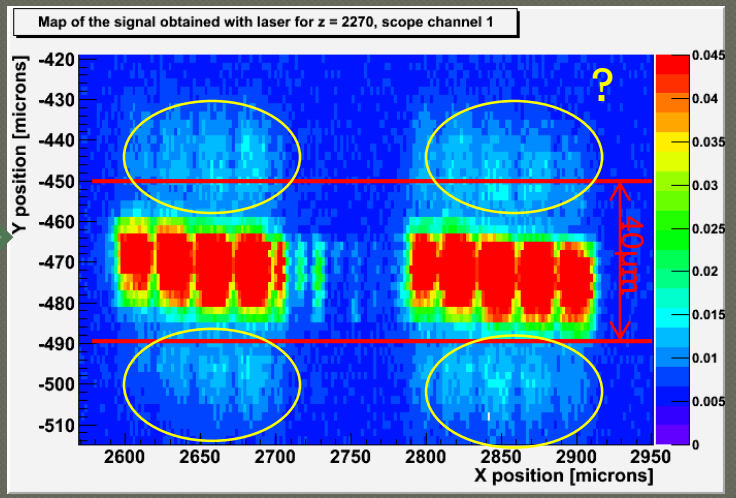
Bias 20V



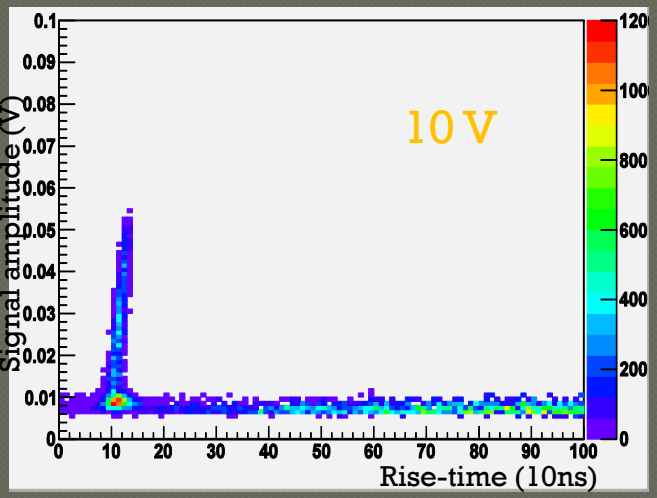
Bias 80V

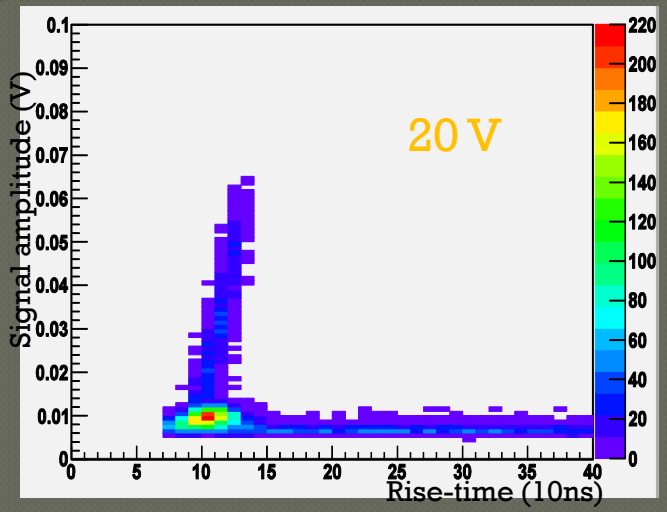


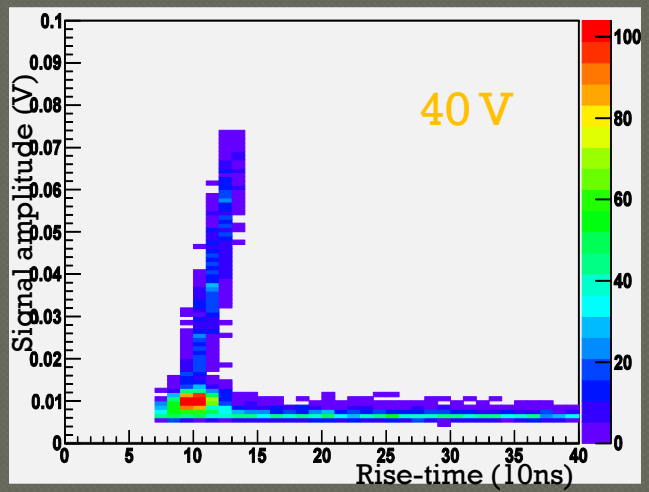
Zoom on z axis

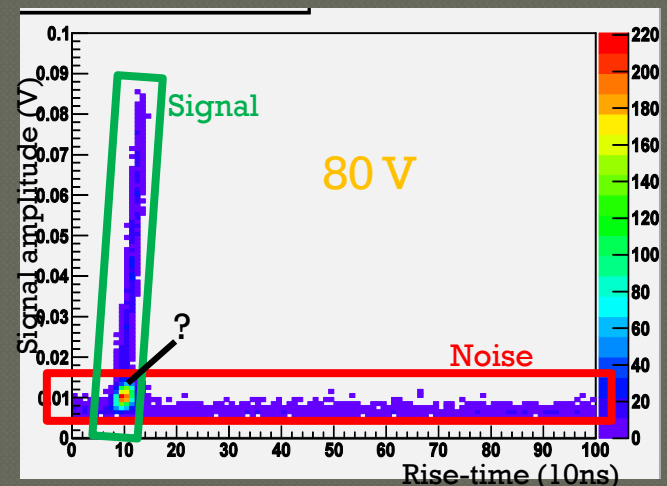


Amplitude vs Rise-time

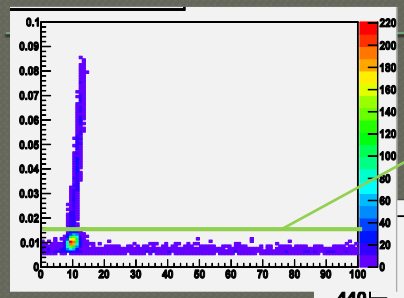




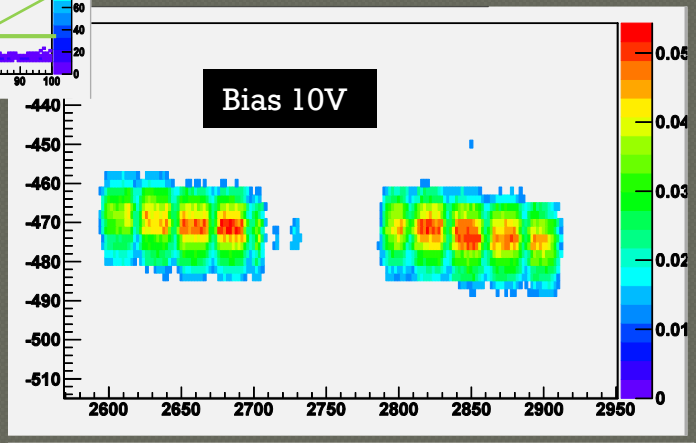


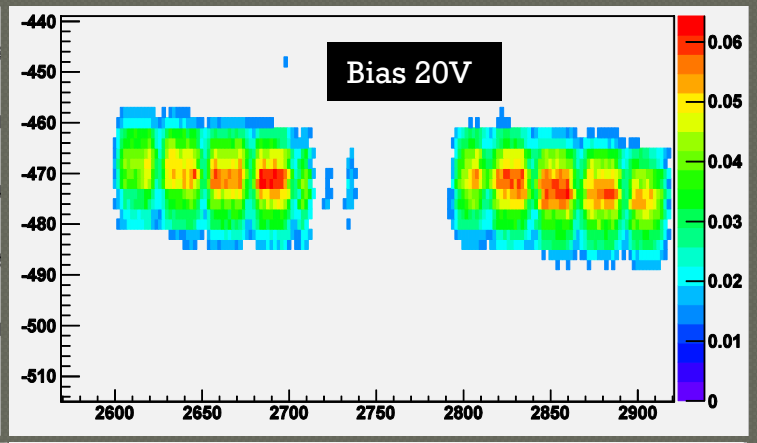


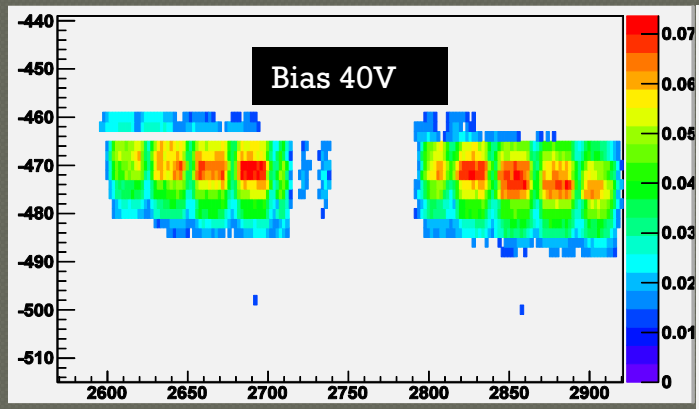
Selecting pure signal

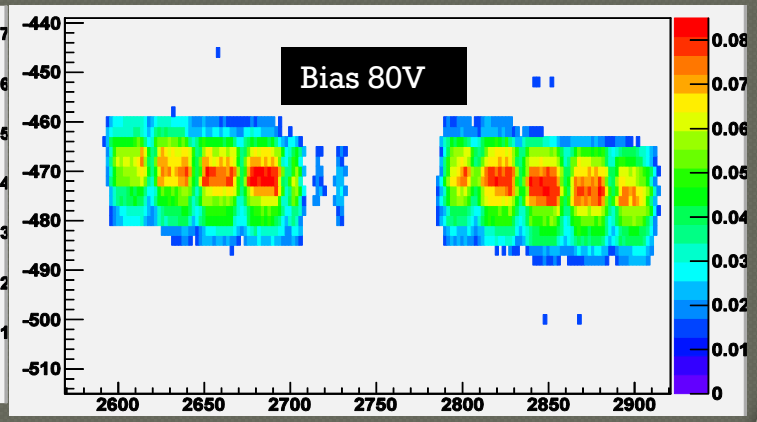


Pure Signal: amplitude > 0.014V

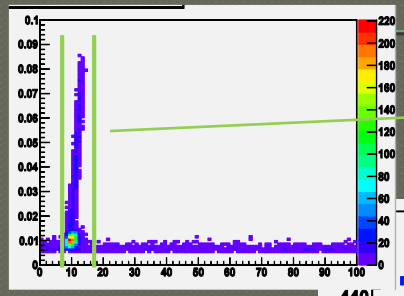




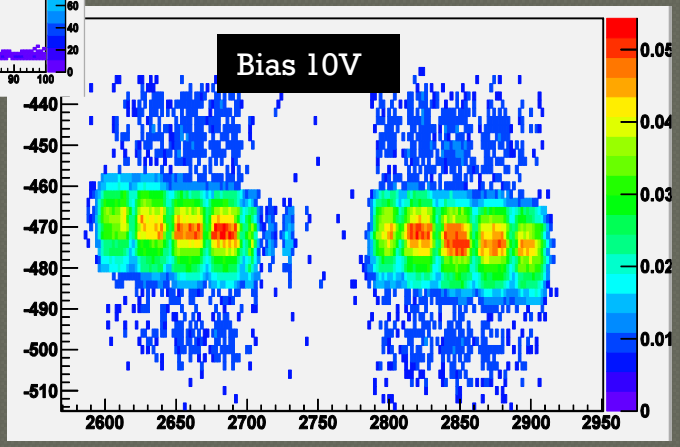


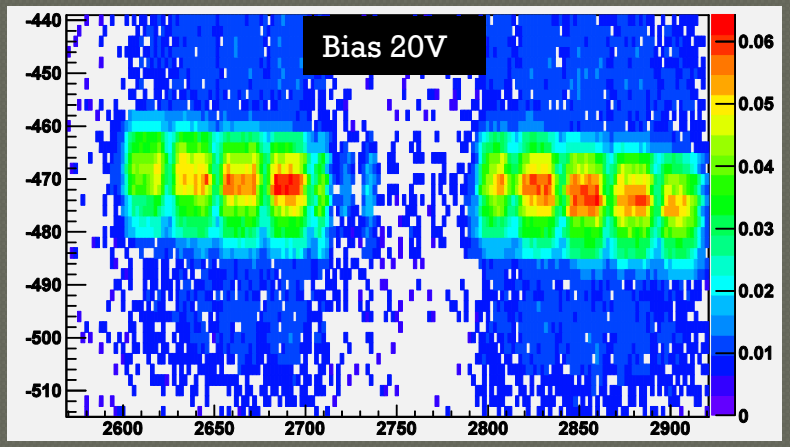


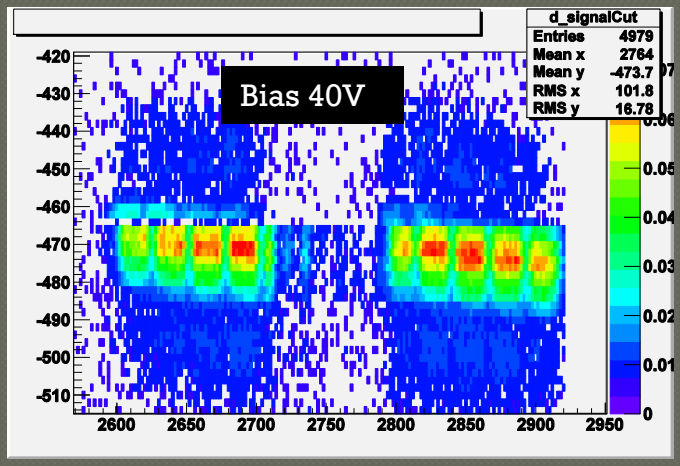
Selecting "extended" signal

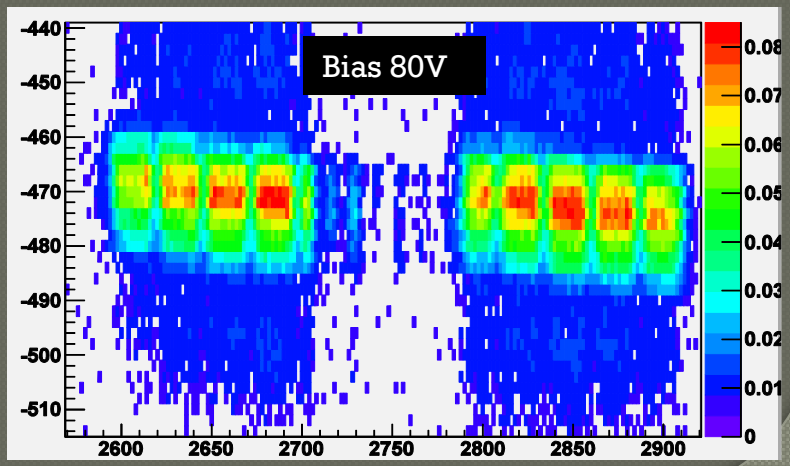


Extended Signal: 70ns < rise-time < 150ns

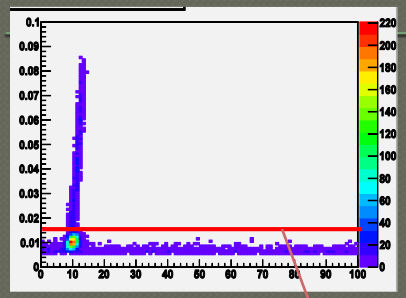




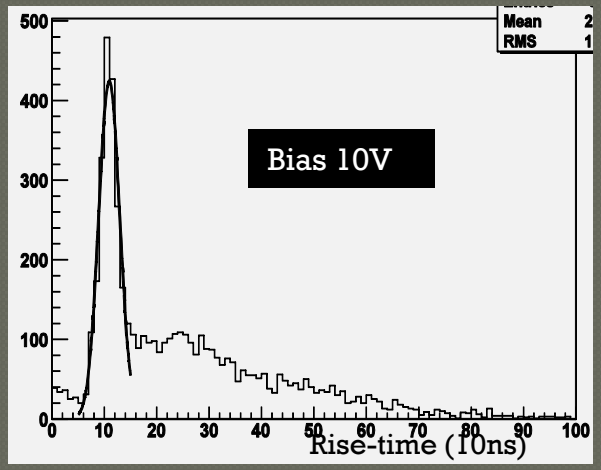


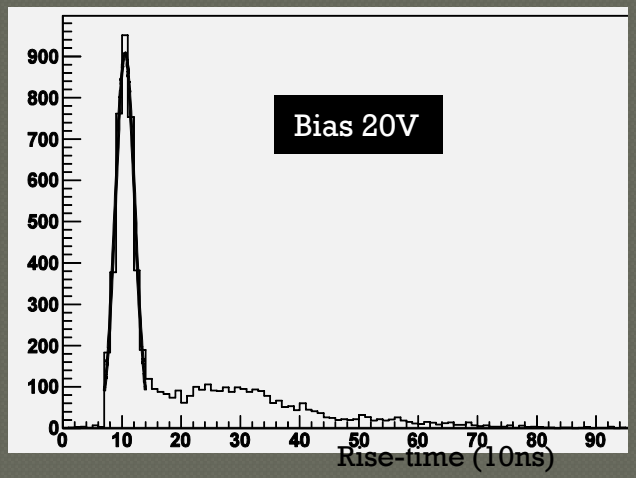


Amplitude distribution

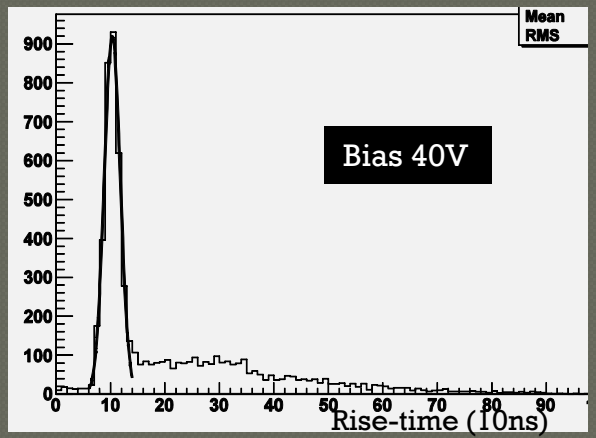


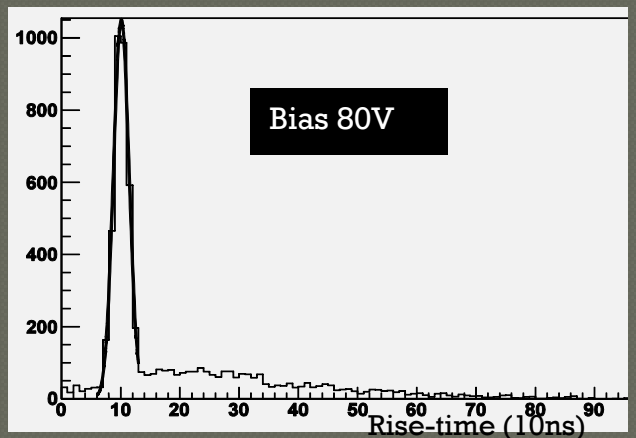
Noise: amplitude < 0.014V





Increase in number of these signals: charge drift/sharing?

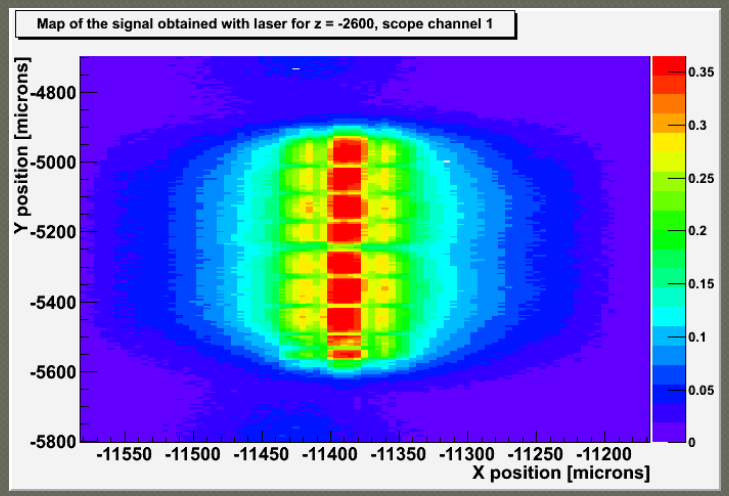




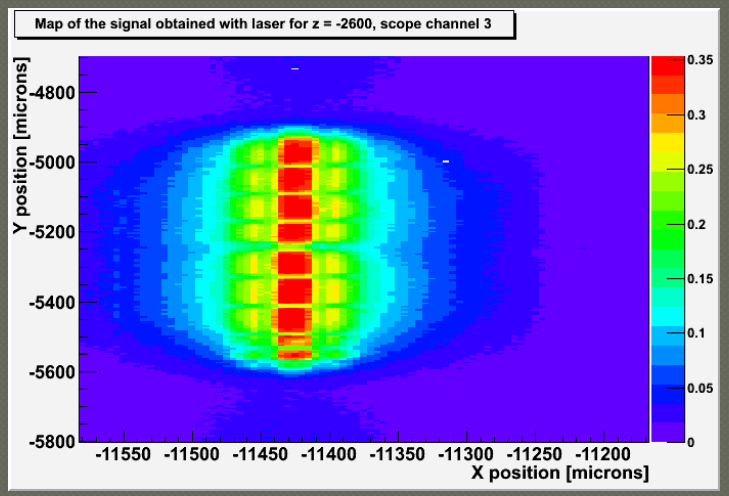
Infrared Laser on Chess1

- DAC setting to default
- Laser at full power
- APA8

Channel 31



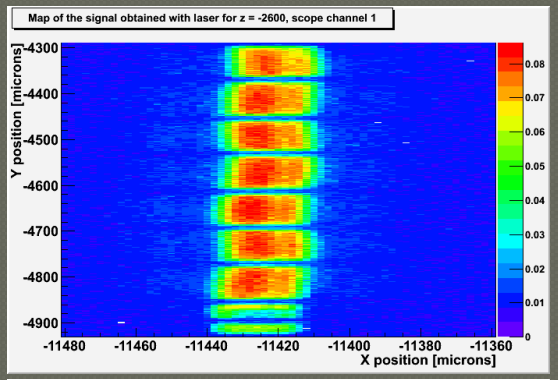
Channel 30

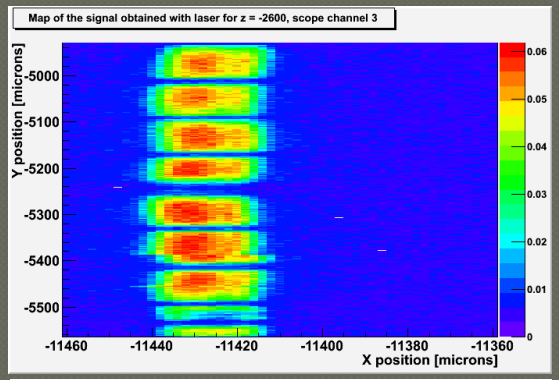


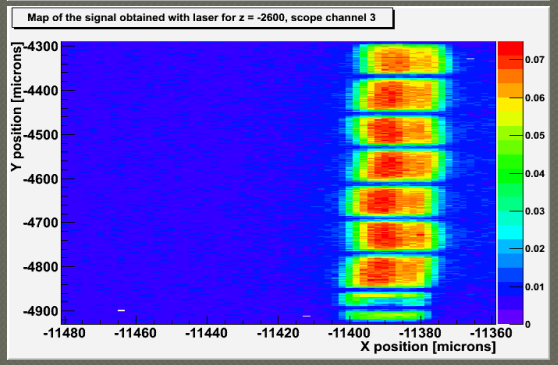
Still lot of superimposition…

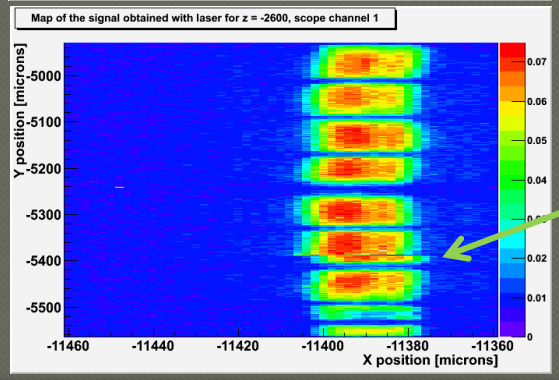
Infrared Laser on Chess1

- DAC setting to default
- Absorber mounted and power to 69%
- APA8







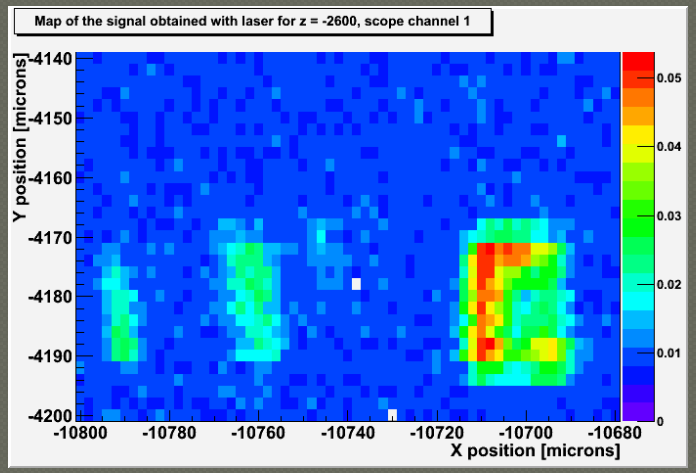


Finally distinction between pixels!

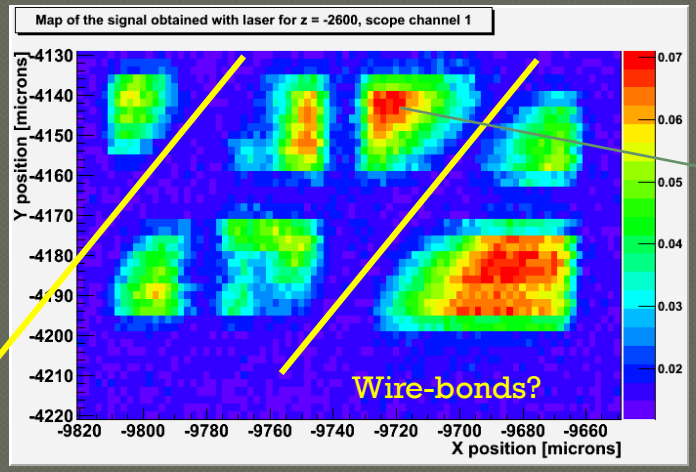
Structures as expected

Some problems in misalignment visible: need for correction.

Infrared on Chess1



APA1



APA4
(2 pixels)