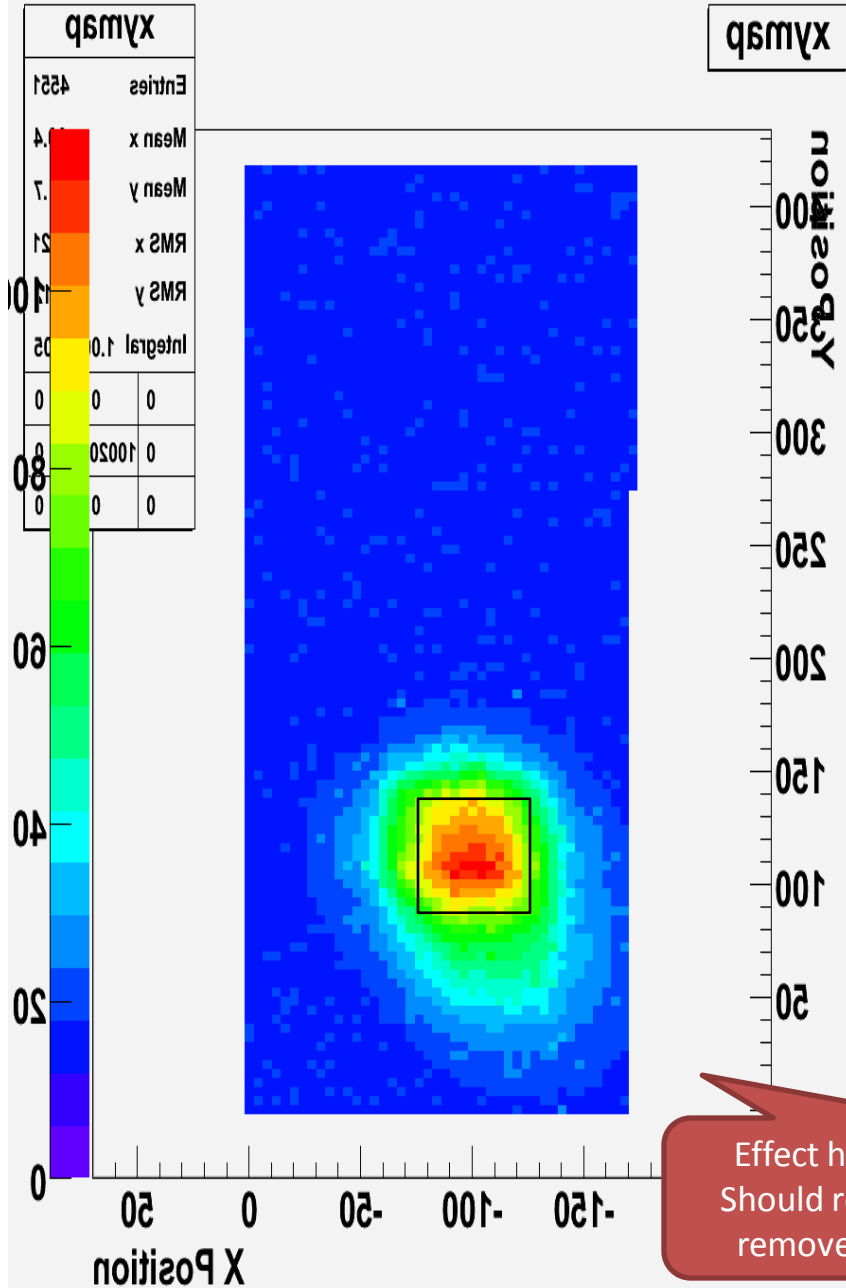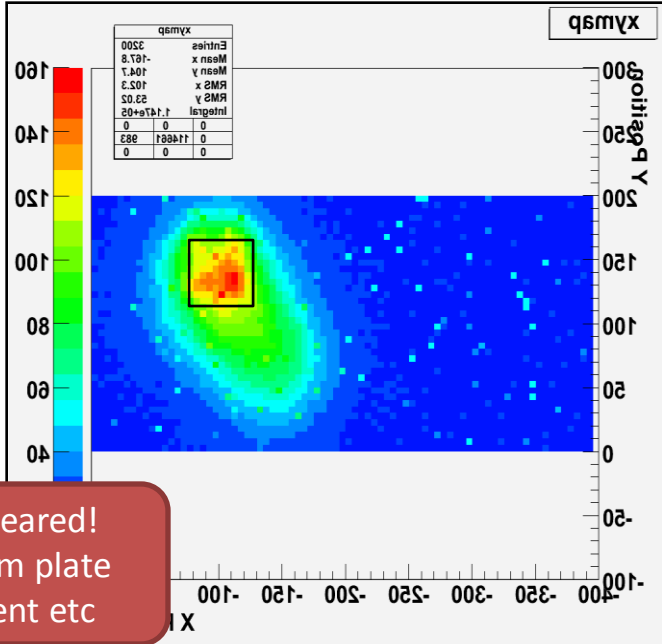# TPAC1.1 Testing

JC/Feb 6th

Laser Scan: Test Pixel

- Test pixels were mounted specially in centre of pcb hole

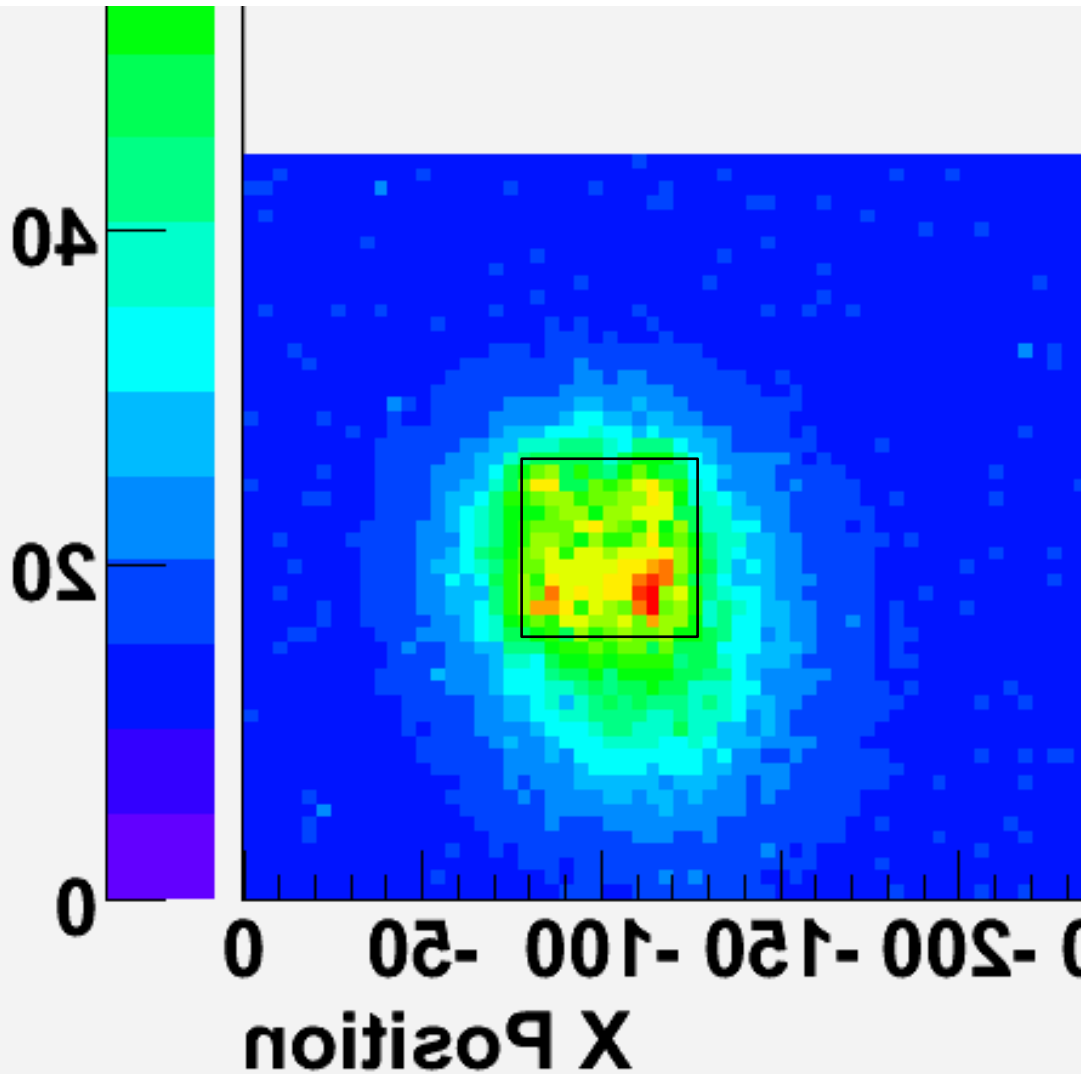- 2um spot
- 4um steps
- 50 measurements/pt

→ Before:

Effect hasn't entirely disappeared!
Should repeat with aluminium plate removed and check alignment etc

Laser Scan: Repeated!

- Removed aluminium back plate
- Black plastic under sensor
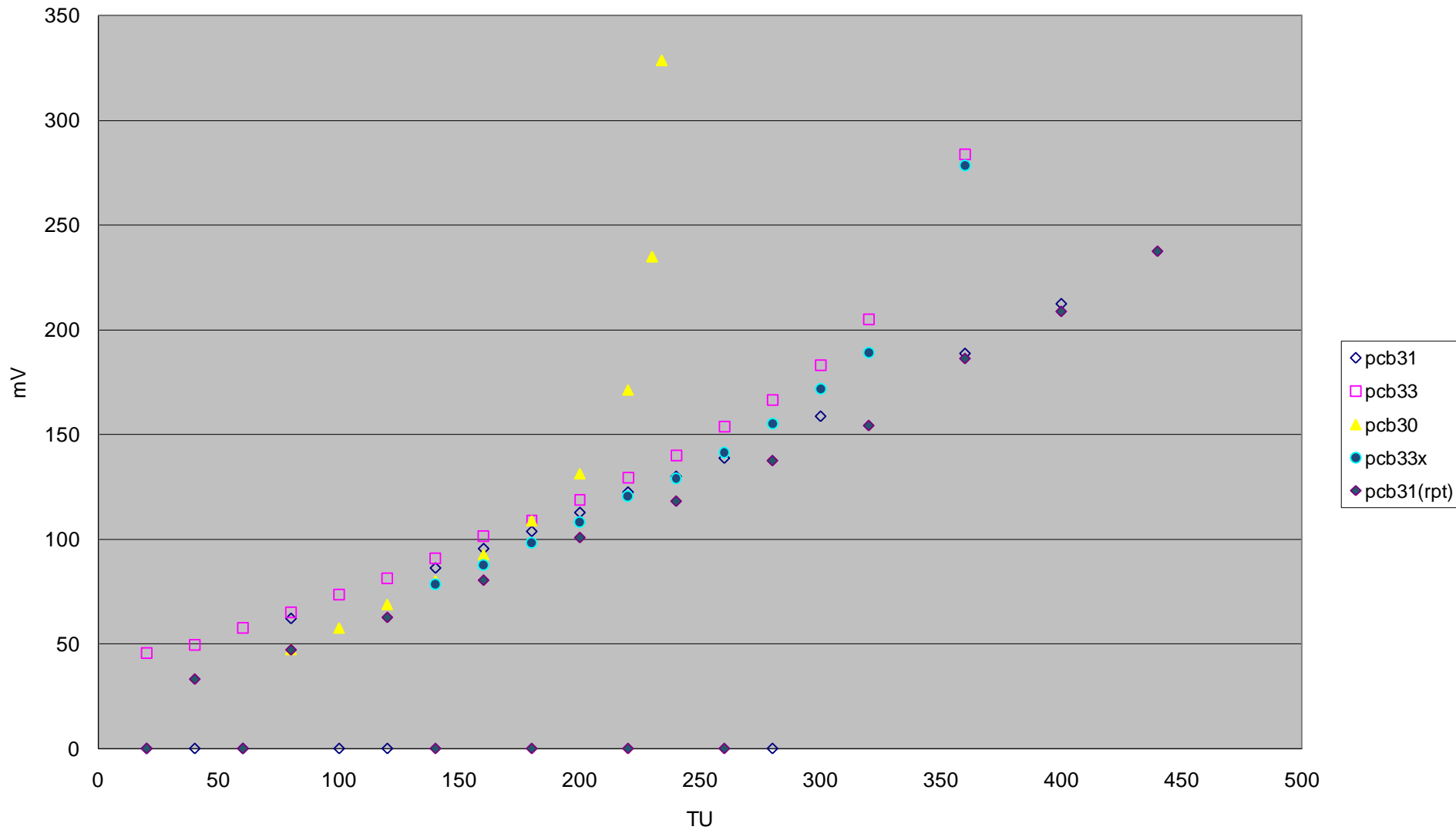
Next:
- Rotate sensor 90˚
- Repeat

TU calibration

- Method
  - Fire laser at ~centre of (v1.1) test pixel
  - Set fixed threshold for test pixel
  - Adjust laser intensity
    - Record mean signal magnitude
      - can adjust aperture or intensity to get larger signals
    - Record probability of hit from scope (>300 samples)
    - Plot s-curve of p(hit) against signal magnitude
    - Estimate p(hit)=0.5 for each threshold setting
    - Plot TU versus signal magnitude
    - Repeat for several sensors…

TU calibration plot: all data

TU calibration

TU calibration plot: refined method

TU calibration