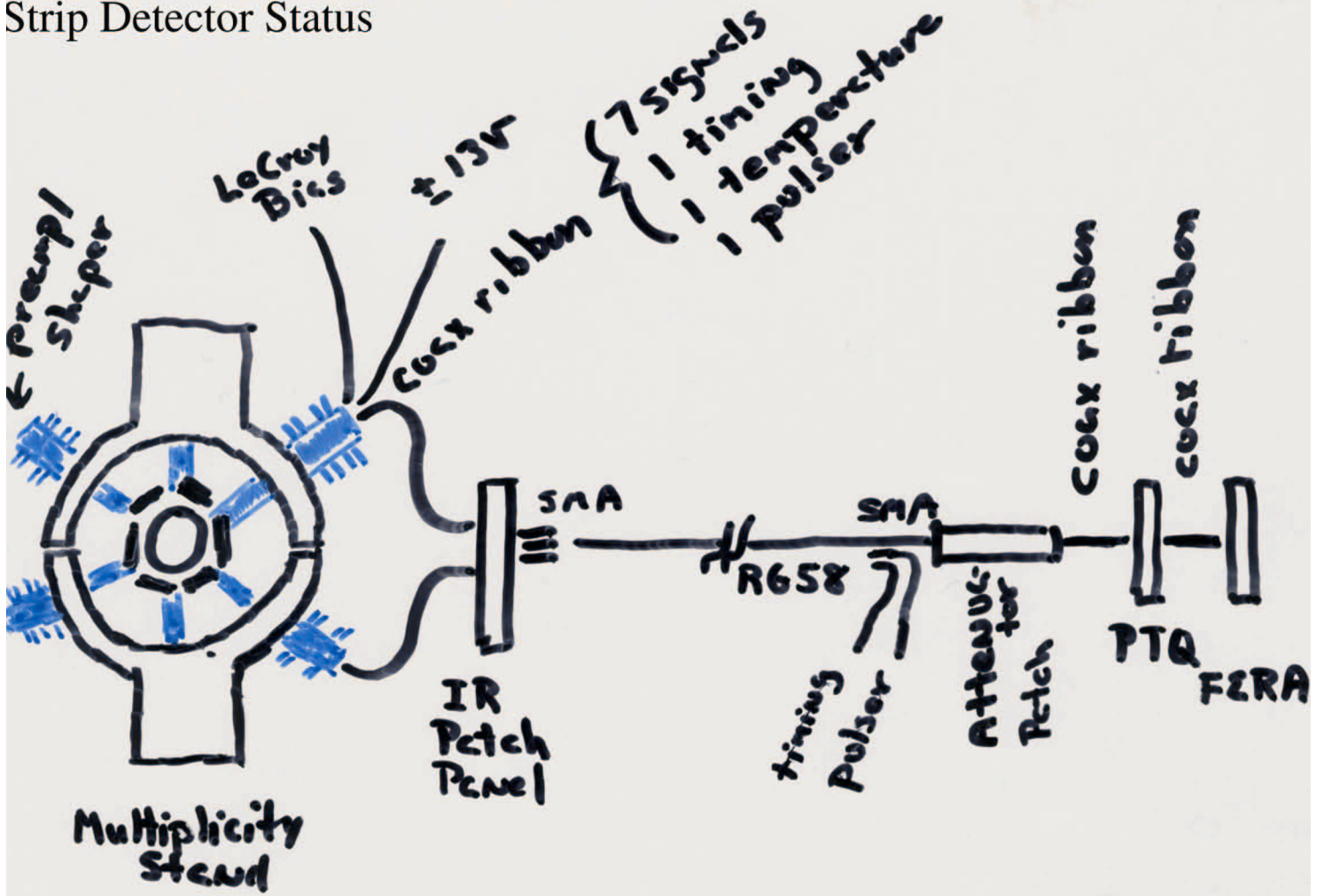
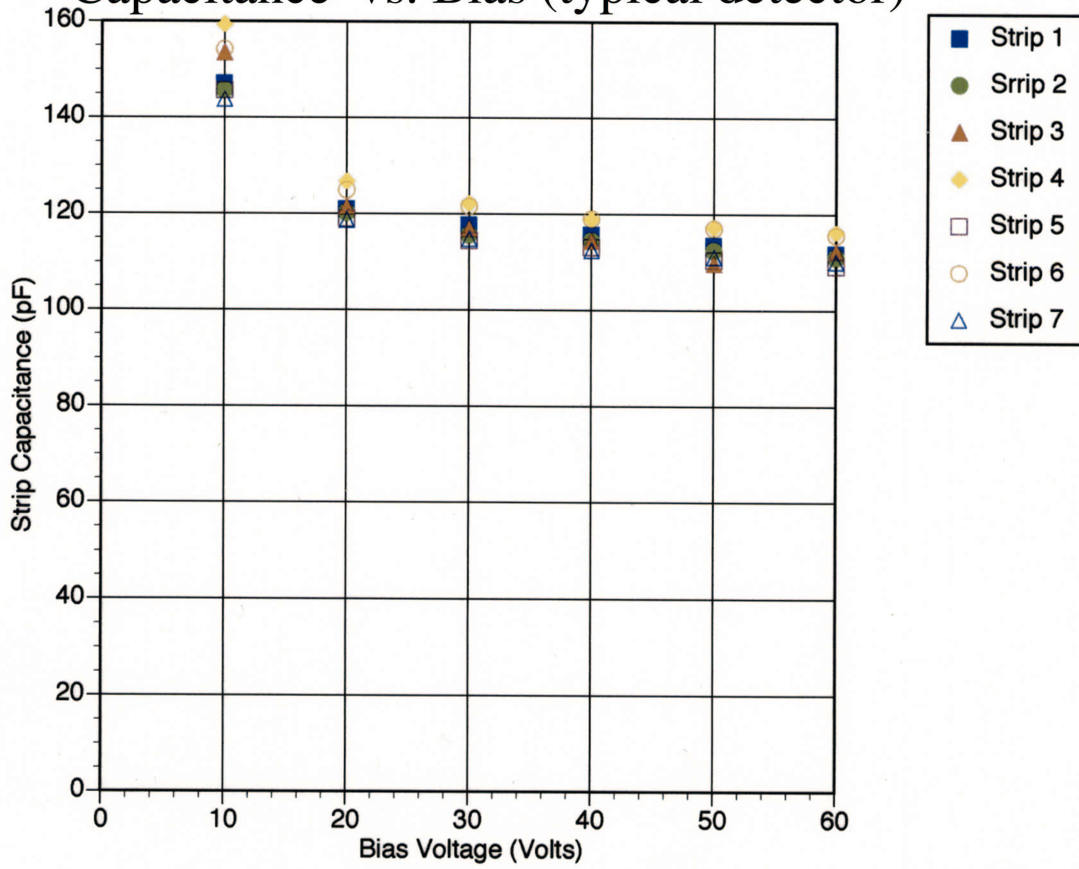


# Strip Detector Status

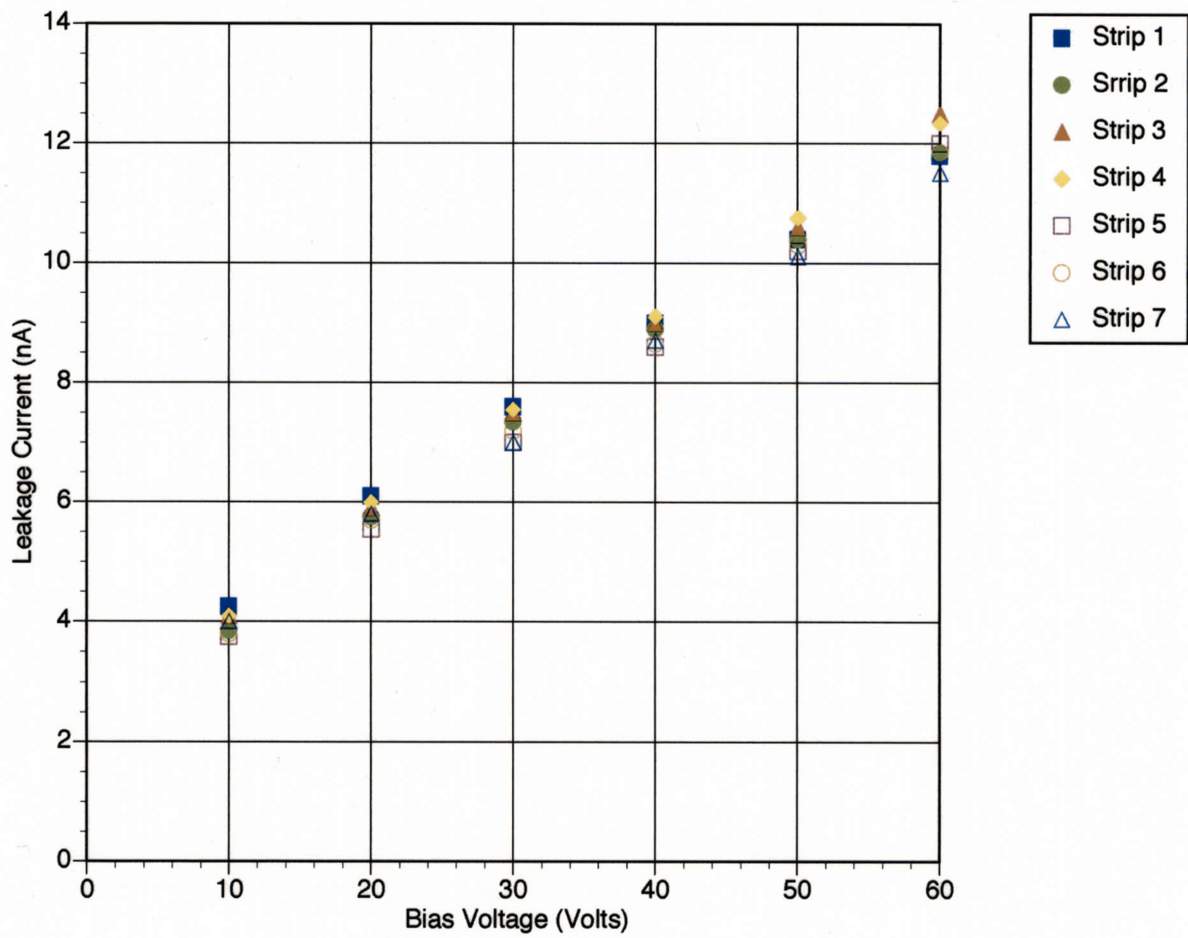


- Status:**
- DONE
  - MOSTLY DONE
  - TO BE DONE
- |                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                          |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p><u>In IR</u></p> <ul style="list-style-type: none"> <li>Mult. Stand</li> <li>Preamp/shaper boxes</li> <li>Coax ribbon</li> <li>Preamp/shaper (set gains, Fix bad channels)</li> <li>IR Patch Panel (Mounting)</li> <li>Bics cables (LeCroy → Preamp/shaper)</li> <li>±13V supplies (Fused)</li> <li>SAFETY REVIEW</li> </ul> | <p><u>In Trailer</u></p> <ul style="list-style-type: none"> <li>Attenu. patch</li> <li>Coax ribbon</li> <li>Check PTQ's</li> <li>Check FERA's</li> </ul> |  |
| <p>Pull Cables<br/>Software</p>                                                                                                                                                                                                                                                                                                 |                                                                                                                                                          |  |

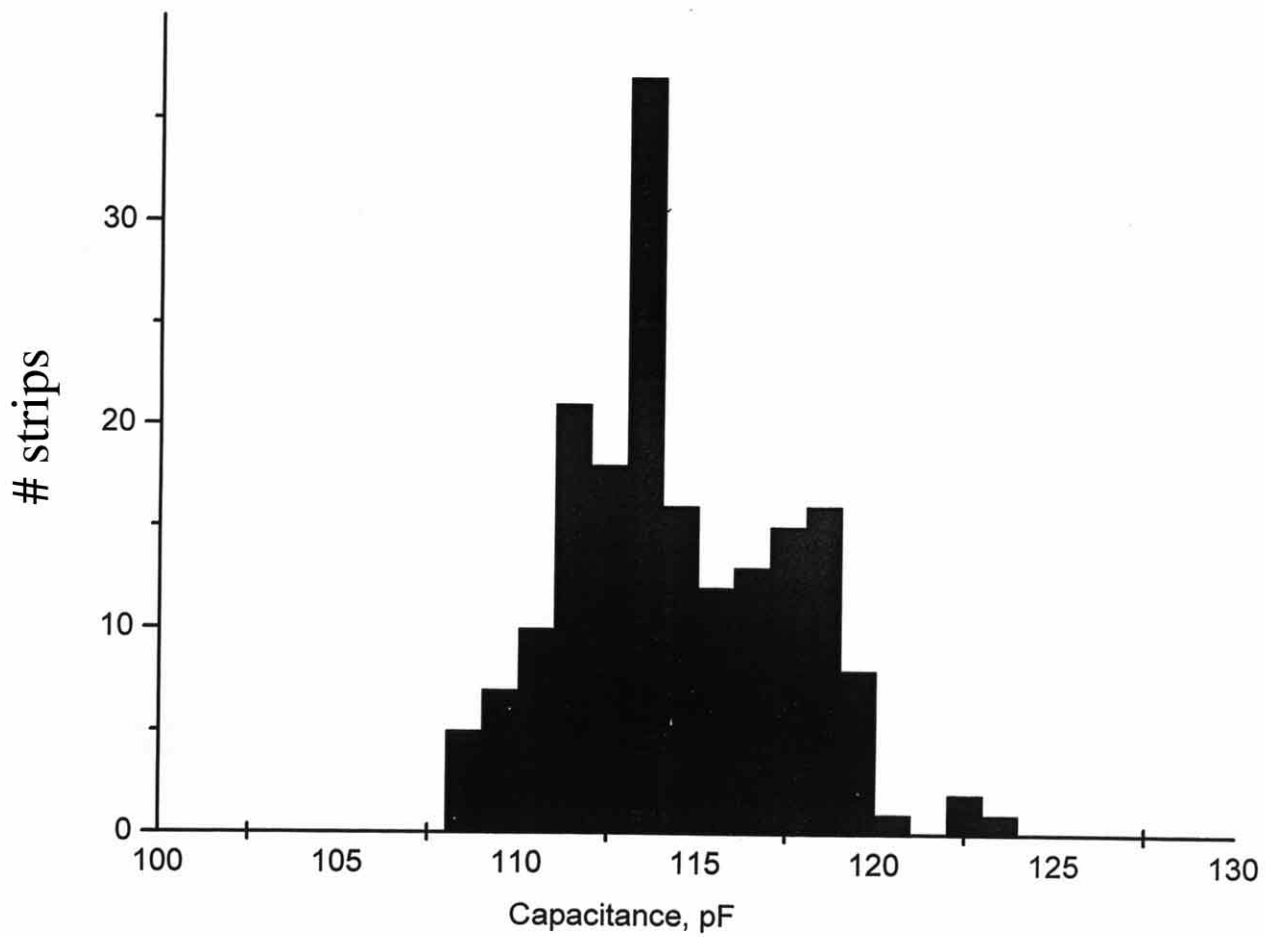
### Capacitance vs. Bias (typical detector)



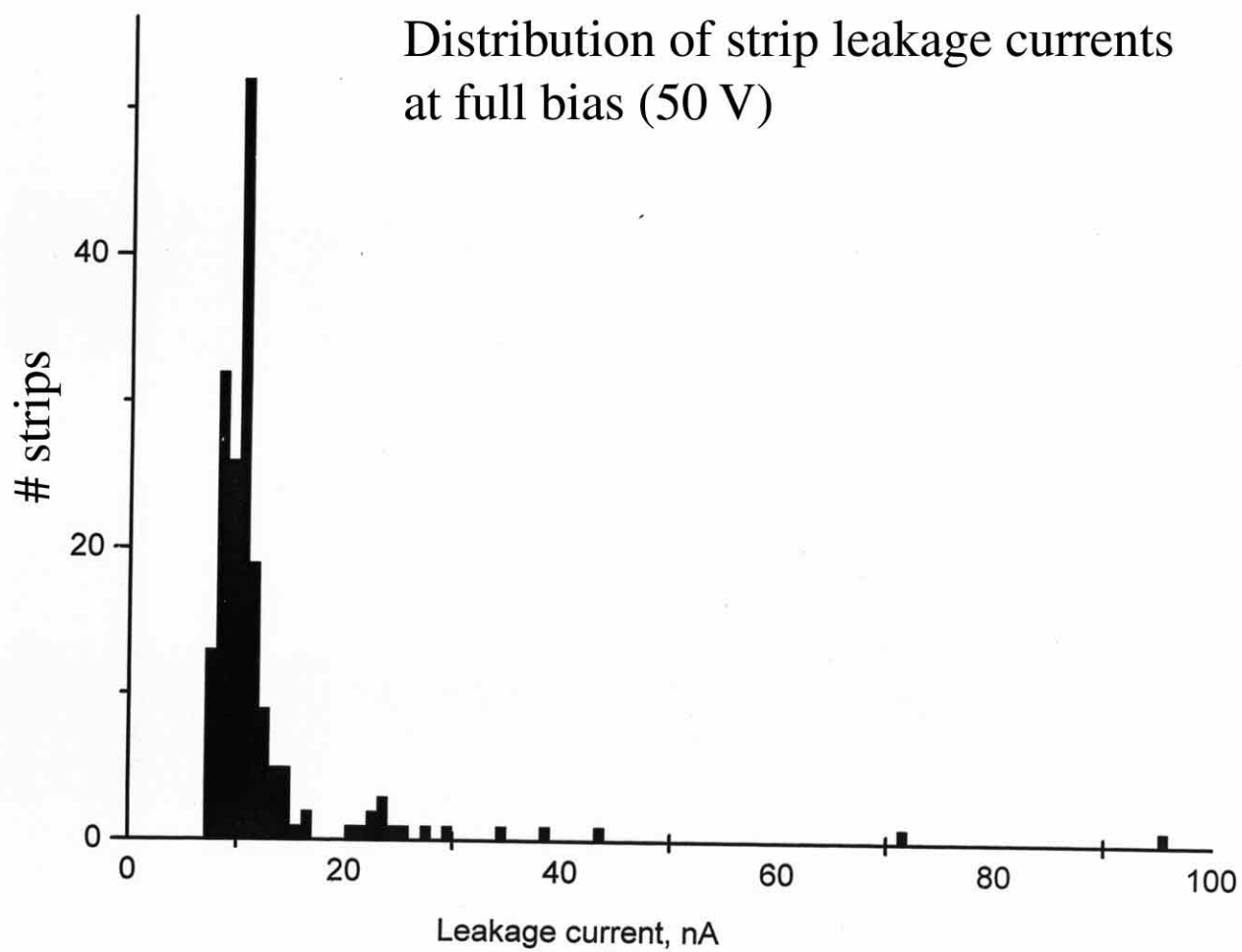
# Leakage Current vs. Bias (typical detector)



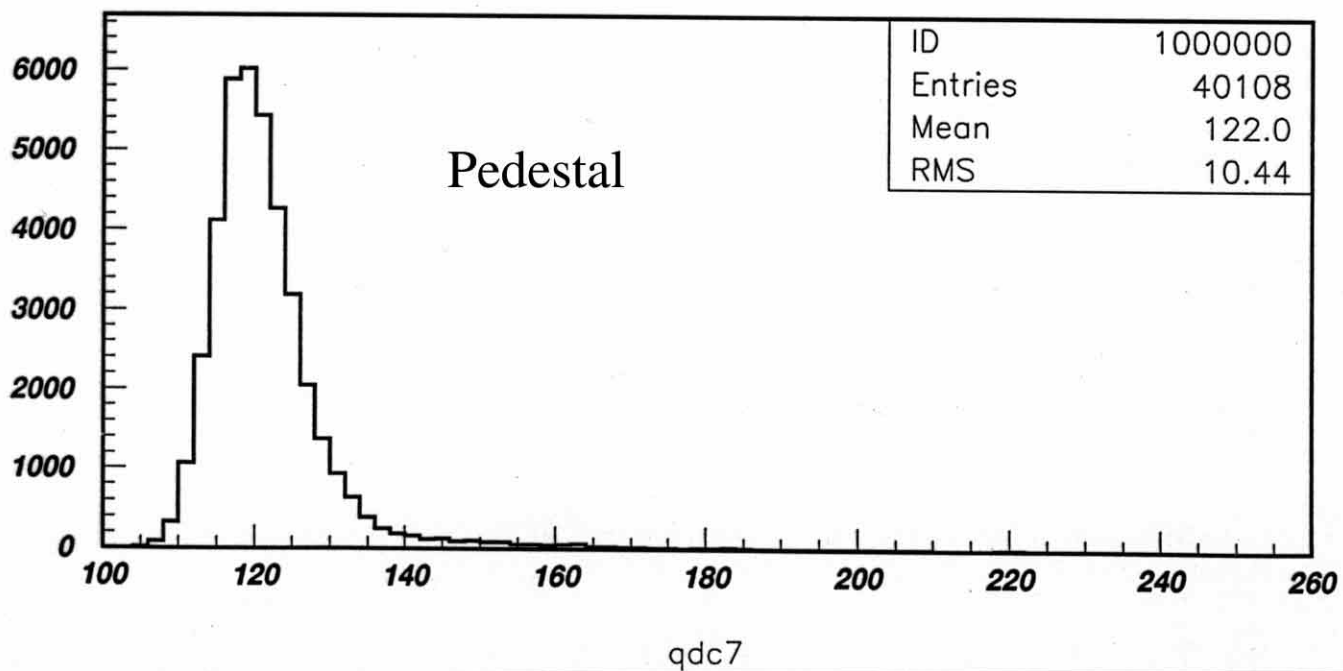
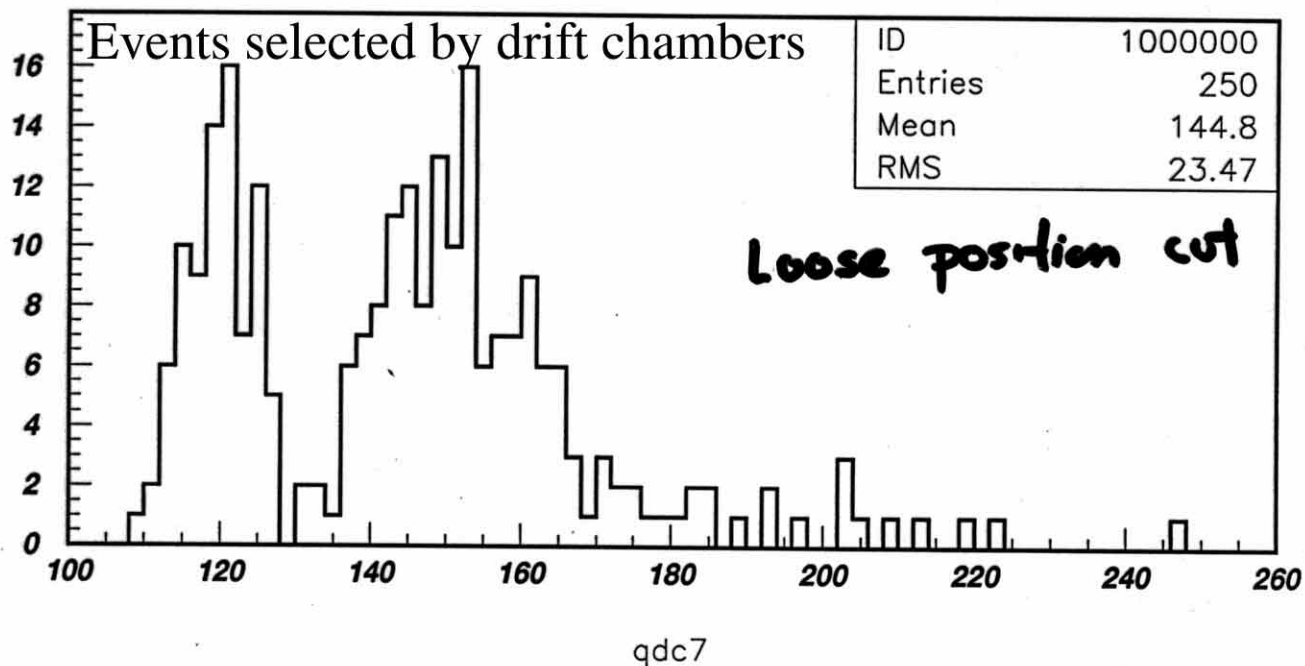
## Distribution of strip capacitance



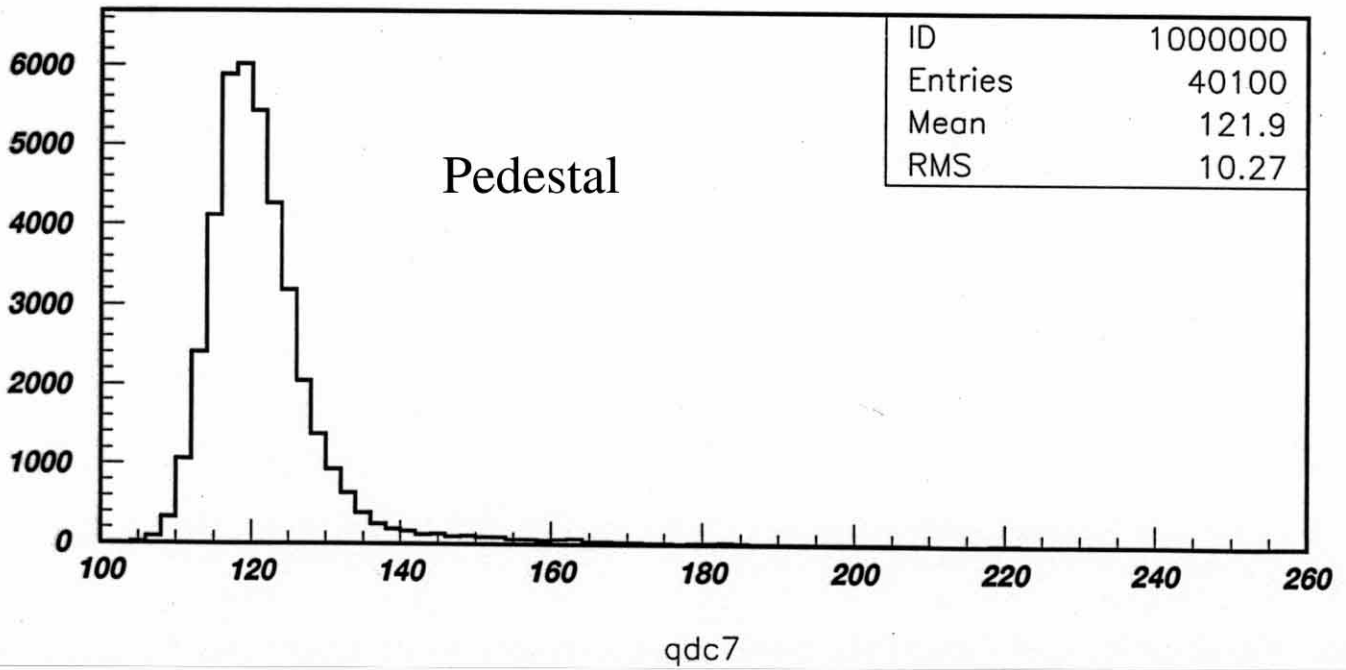
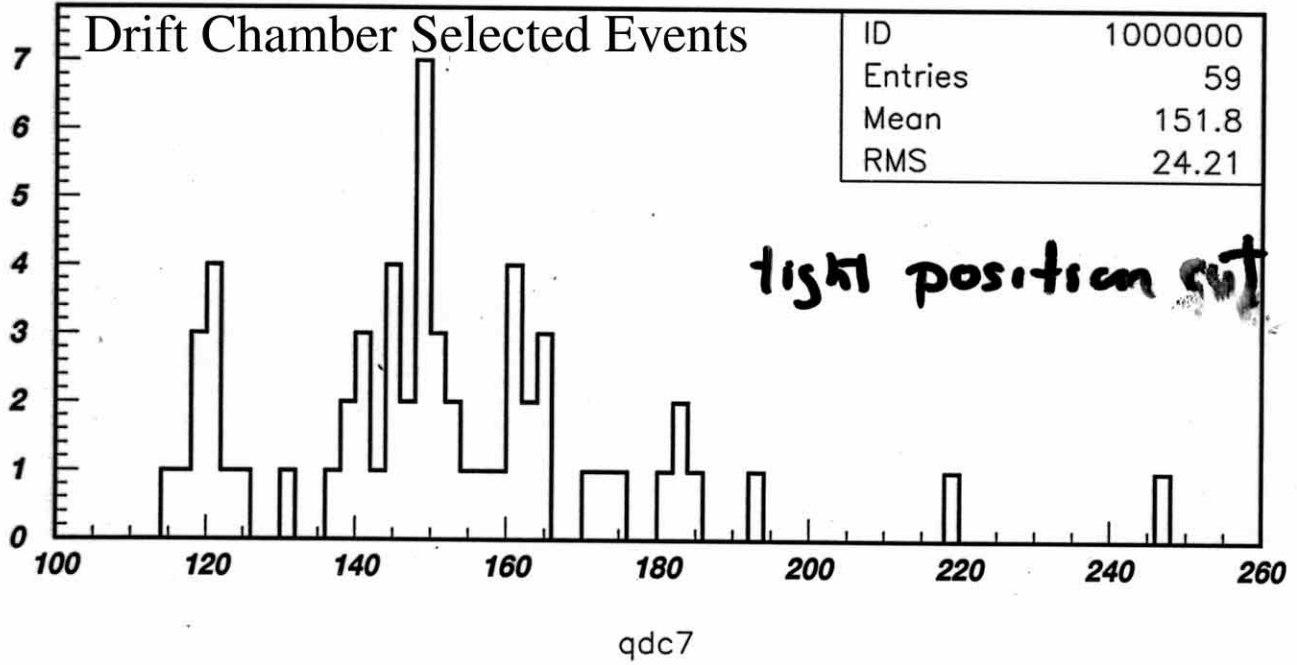
Distribution of strip leakage currents  
at full bias (50 V)



# Cosmic Ray



# Cosmic Rays



## Issues:

**PTQ pedestal walk**

(PTQ needs to be strobed at rate of  $\sim 10\text{Hz}$  to keep pedestal from shifting)

**Time signals**

(Good for events with  $>5\text{ MeV}$  in full strip detector. Will require discriminator and tdc to use.)

**Initial gain settings**

For 11 bit FERA

2000 ch  $\rightarrow$  40,000 keV

$\Downarrow$

20 keV/ch

$\Downarrow$

1 MIP  $\rightarrow$  Channel 8

**Calibration**

(Plans shown on next slide.)

**Cooling**

(Will active cooling be necessary?  
May depend on conditions at IR.)

**Radiation damage**

(How protective do we want to be during the initial tuning?)



# Calibration

## 1.] Pulser

- > Determine pulser input to "standard" capacitor equivalent to 5.49 MeV  $^{241}\text{Am}$
- > Adjust gains for desired output with "standard" input

## 2.] Transmission measurement

- > Mount strip detector in front of mid-rapidity arm.

## 3.] Ongoing stability check

- > Pulser input to preamp/shapers