Hybrid 5p125 Traveler

January 31, 2000

1 Connectivity

Repairs on shorts:

Fixes for opens: Bus 0 open in cable; fixed with added wire.
Gnd open to RR on to chip 1; fixed with added wire.
Bus 4B open on Chip 5(known open). Fixed.

2 Chips

The following chips were assembled on this hybrid (in the order that the chips get read out):
Hybrid 5P125 has die: 187-117 187-118 187-122 187-123 187-125

3 Data Analysis Summary

The following summarizes the findings of the Burn-in data analysis program. The first chip in the readout name is numbered 0.

```
% Hybrid 5p125 classification info. Created 10:14:59 01/31/00

Hybrid 5p125 quality: fair
Chip classification: fair fair fair good fair
Bad channels (chip-channel): 0-61 2-107 4-127
Bad cells: none
Random bad capacitors (chip-cell-channel): 1-23-62 1-25-62 1-27-62
   1-3-62 1-36-62 1-36-63 2-16-68 4-10-112
Channels at pedestal needed for DCMS: 31.8 37.7 36.7 34.6 37.7
```

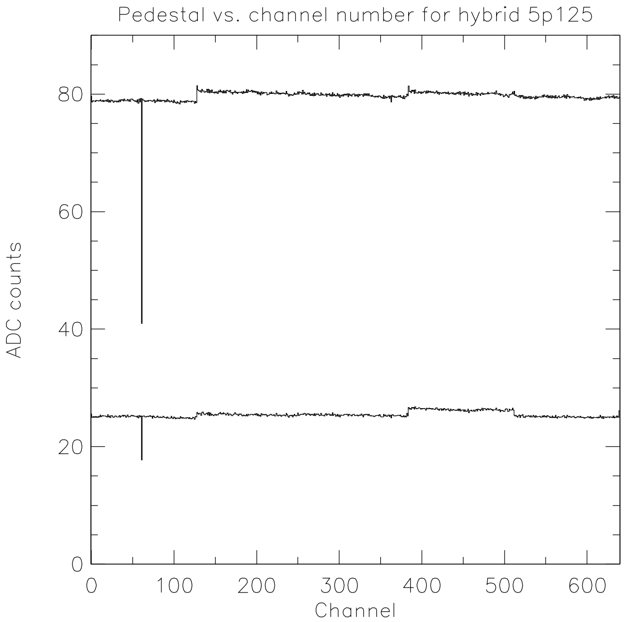
4 Comments

Encapsulated. FE DV finger gold bonds. HV tested.

5 Pedestal

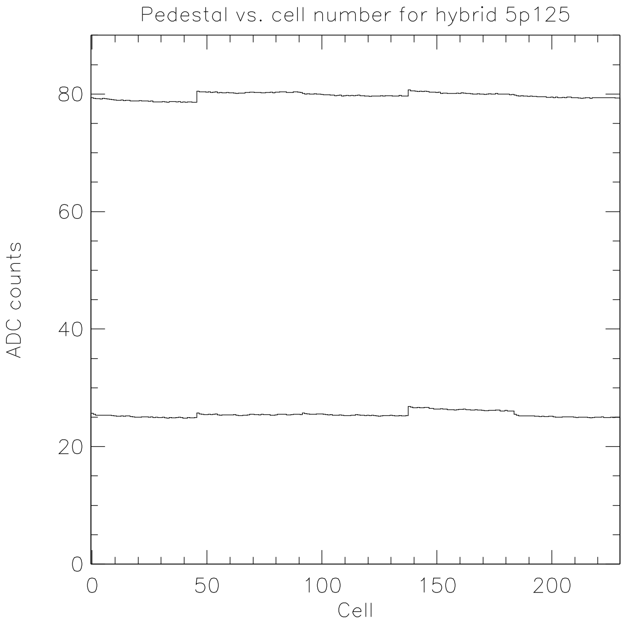
The following plot shows the pedestals vs. channel number with and without charge injection:

Pedestal for each Channel



The following plot shows the average pedestal vs. pipeline cell ID with and without charge injection. The x-axis is cell ID offset by 46 for each chip. Thus cell ID 5 for chip 1 is at x=5, chip 2 at x=51, chip 3 at x=97, etc.

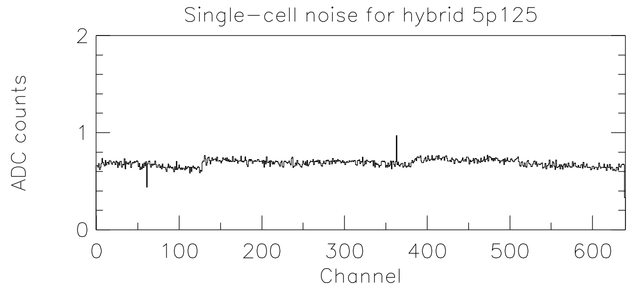
Pedestal vs. Pipeline Cell ID

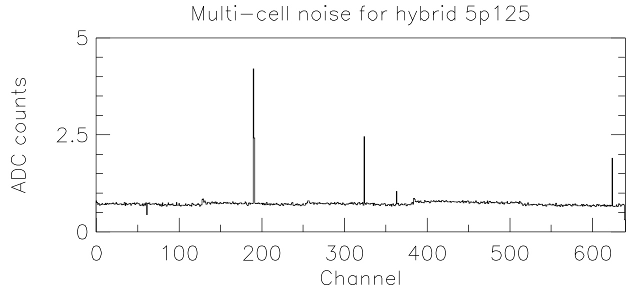


6 Noise

The following plots show the single-cell and multi-cell RMS noise:

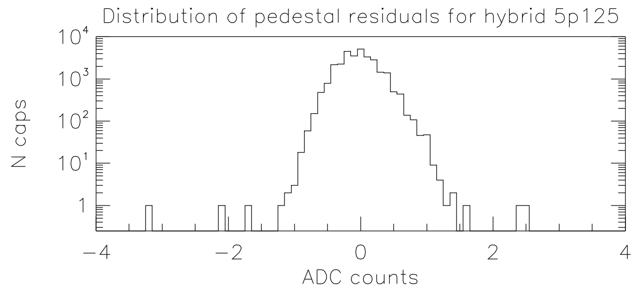
RMS Noise

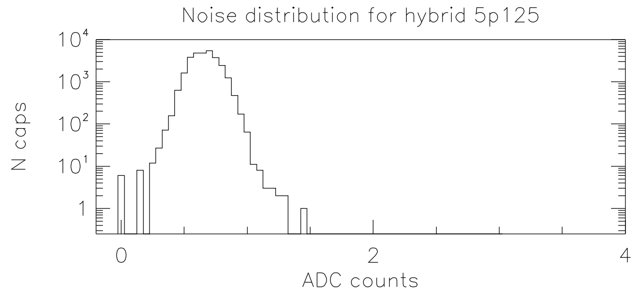




The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

Distribution of Pedestals and Noise





7 Currents

The following plots show the supply currents per chip as a function of measurment number. Currents are measured approximately every 10 minutes:

Supply Currents During Burn-in