Hybrid 5z144 Traveler

February 17, 2000

1 Connectivity

Repairs on shorts:

Fixes for opens:

2 Chips

The following chips were assembled on this hybrid (in the order that the chips get read out):
Hybrid 5Z144 has die: 095-048 095-051 100-002 100-003 210-043

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 5z144 classification info. Created 10:15:27 02/16/00

Hybrid 5z144 quality: fair
Chip classification: good fair fair fair good
Bad channels (chip-channel): 1-44
Bad cells: none
Random bad capacitors (chip-cell-channel): 1-13-43 2-12-101 3-11-120
   3-11-121 3-14-120 3-14-121 3-15-120 3-17-120 3-17-121 3-18-0 3-18-1
   3-18-100 3-18-3 3-18-48 3-18-49 3-19-120 3-19-121 3-2-17 3-21-120
   3-21-121 3-30-119 3-30-120 3-30-121 3-31-120 3-32-120 3-34-0 3-34-1
   3-34-11 3-34-28 3-34-31 3-34-49 3-34-72 3-43-120
Channels at pedestal needed for DCMS: 35.7 39.7 35.8 36.7 32.7
```

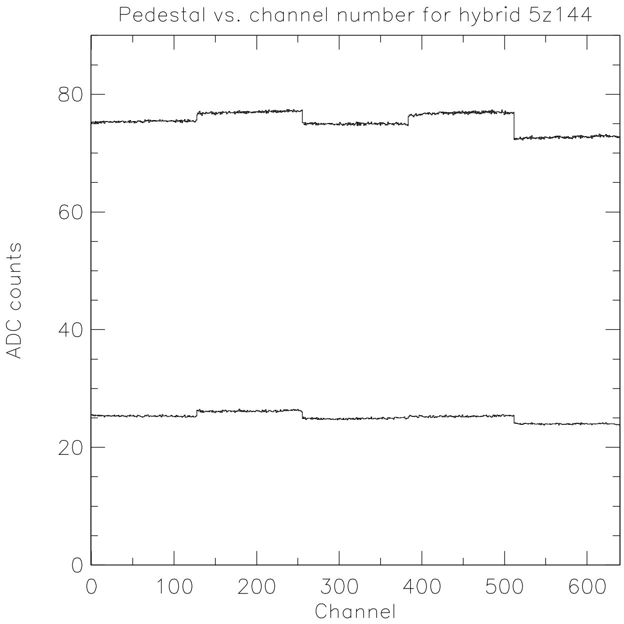
4 Comments

Encapsulated. FE DV finger gold bonds. HV tested.

5 Pedestal

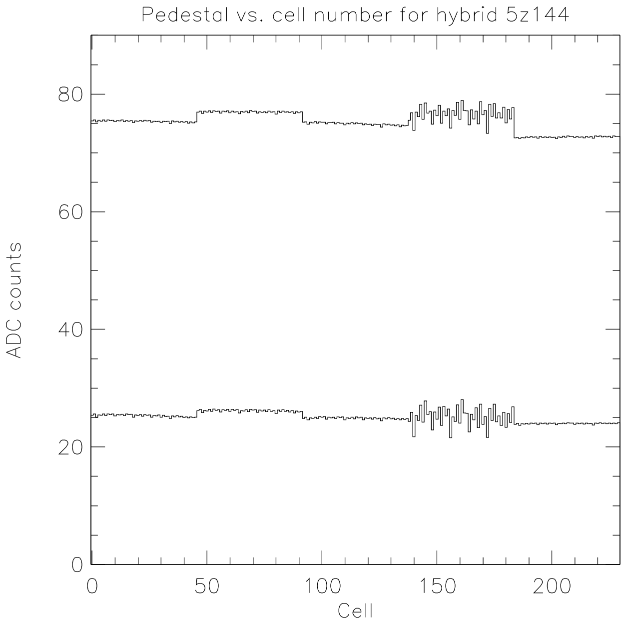
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

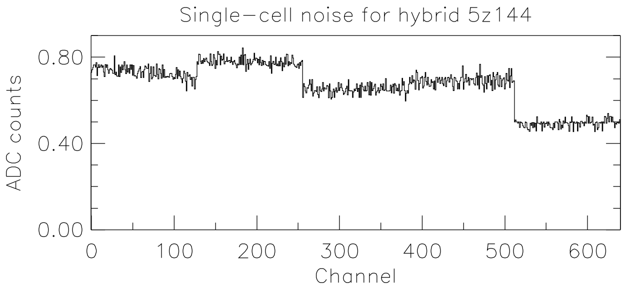
Pedestal vs. Pipeline Cell ID

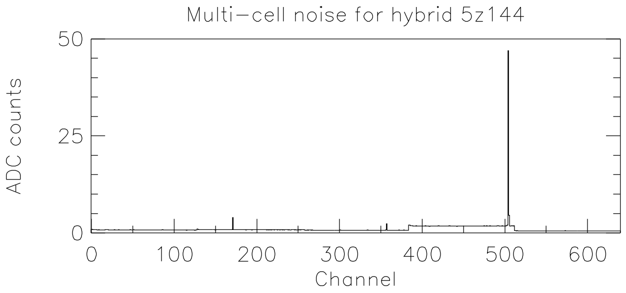


6 Noise

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

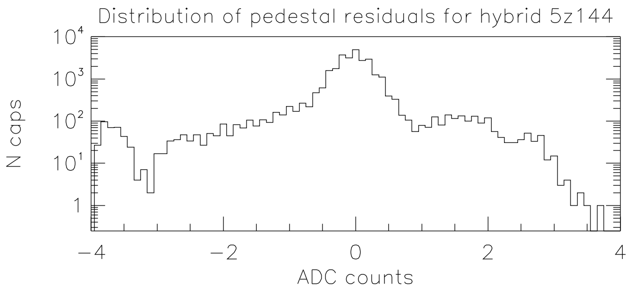
RMS Noise

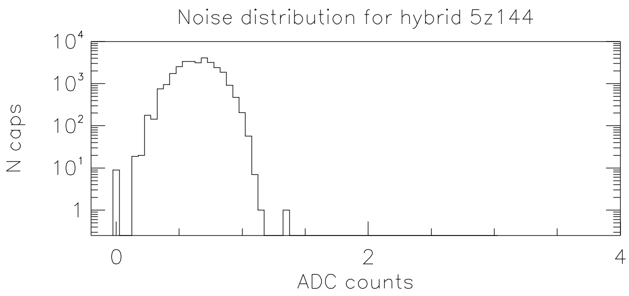




The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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