Hybrid 7z108 Traveler

June 27, 2000

1 Connectivity

Repairs on shorts:
Fixes for opens: Bus 2B open to Chip2. Fixed.

2 Chips

The following chips were assembled on this hybrid (in the order that the chips get read out):
Hybrid 7Z108 has die: 171-082 171-085 171-092 171-093 171-094 171-100 171-101

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 7z108 classification info. Created 08:57:19 06/23/00

Hybrid 7z108 quality: fair
Chip classification: good fair fair fair good fair fair
Bad channels (chip-channel): 1-72 5-19 5-125
Bad cells: none
Random bad capacitors (chip-cell-channel): 2-17-76 3-45-17 6-16-3
   6-39-71
Channels at pedestal needed for DCMS: 32.5 33.4 31.6 33.7 33.2 29.7 33.6
```

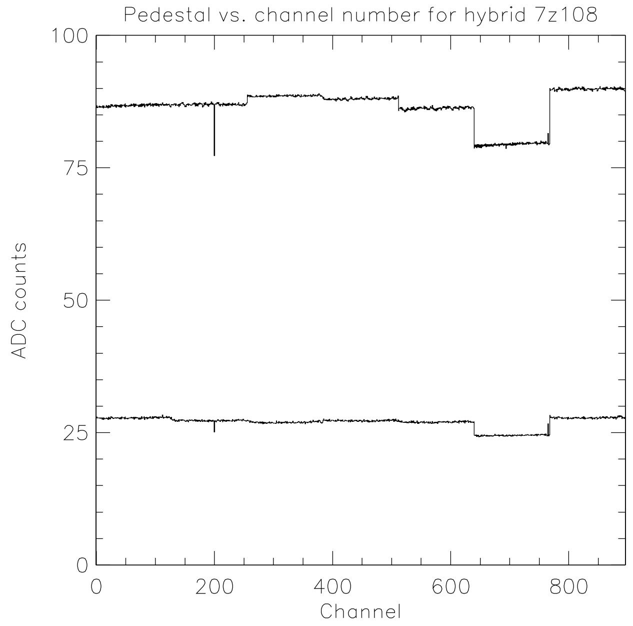
4 Comments

Encapsulated. FE DV finger gold bonds. HV tested.
Chip 6 replaced.

5 Pedestal

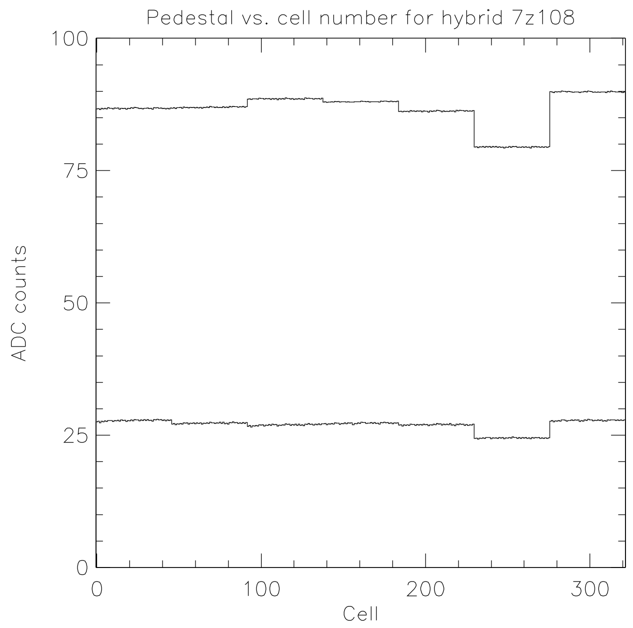
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

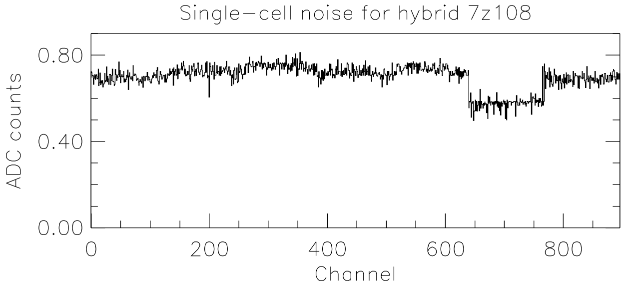
Pedestal vs. Pipeline Cell ID

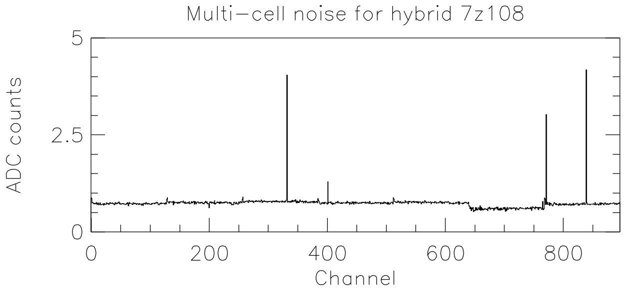


6 Noise

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

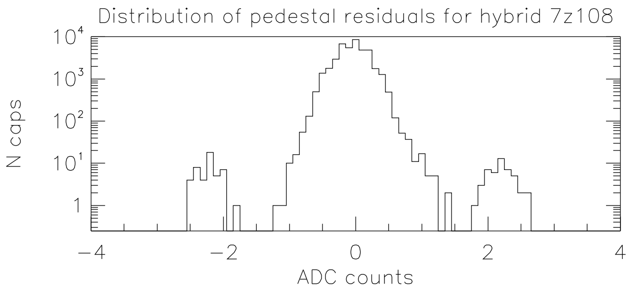
RMS Noise

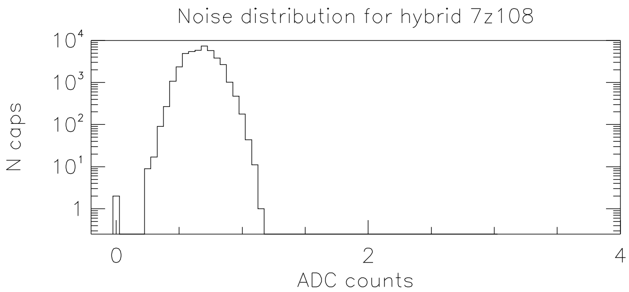




The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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