Hybrid 5z4 Traveler

January 31, 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 5Z4 has die: 037-009 037-010 037-011 037-015 037-016

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 5z4 classification info. Created 17:55:42 12/01/99

Hybrid 5z4 quality: fair
Chip classification: fair good good good good
Bad channels: none
Bad cells: none
Random bad capacitors (chip-cell-channel): 0-16-90 0-3-89 0-3-90
   0-3-91 0-30-90 0-33-90 0-33-91 0-34-90 0-36-90 0-36-91 0-38-90
   0-38-91 0-4-90 0-40-90 0-40-91 0-5-90
Channels at pedestal needed for DCMS: 36.4 35.7 34.7 32.6 36.6
```

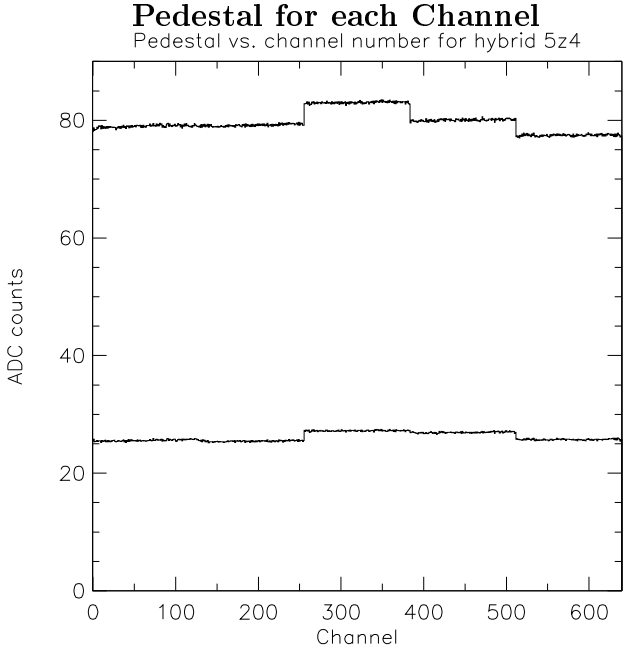
4 Comments

Automatic chip-to-chip DV bonds

5 Pedestal

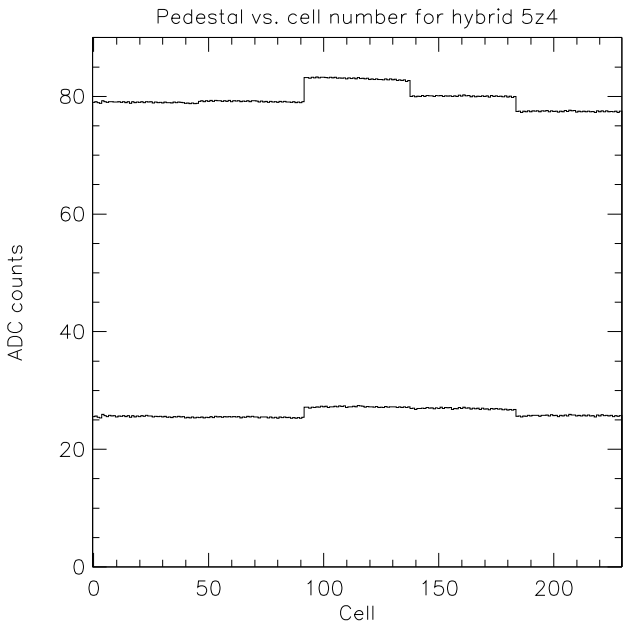
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

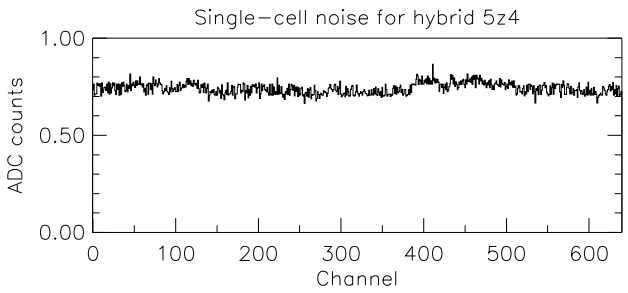
Pedestal vs. Pipeline Cell ID

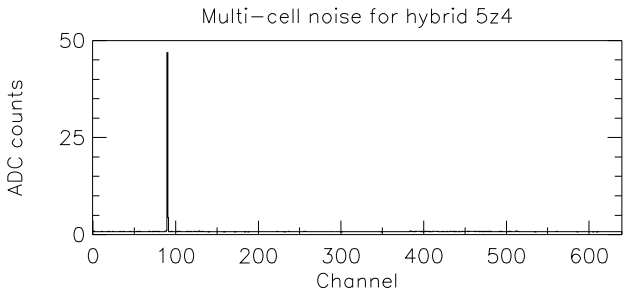


6 Noise

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

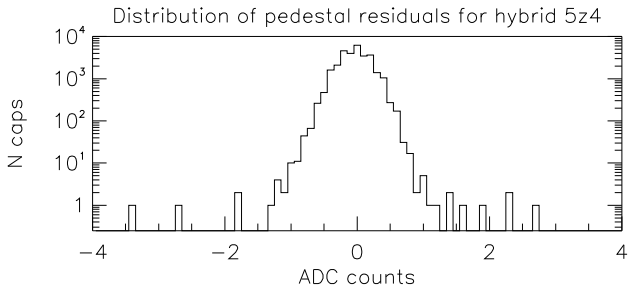
RMS Noise

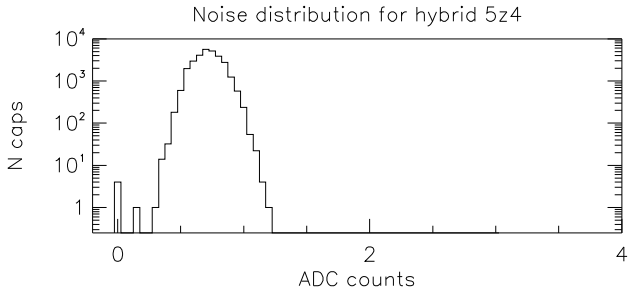




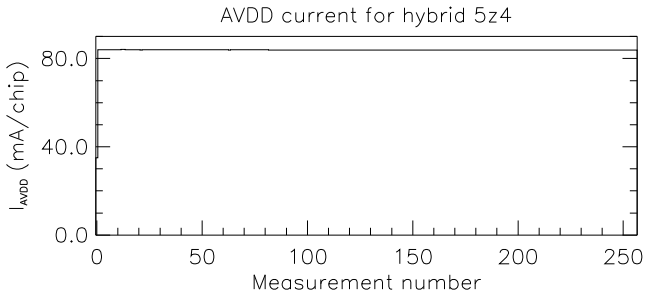
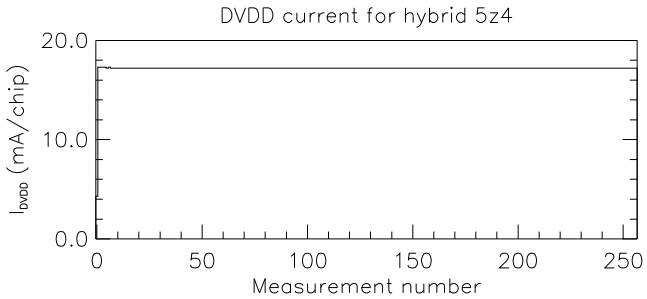
The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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