Hybrid 5z3 Traveler

February 23, 2000

1 Connectivity

Repairs on shorts: HV was shorted to AVDD. Cut away area where short occured, added red wire to get HV from cap to finger trace.

Fixes for opens:

2 Chips

The following chips were assembled on this hybrid (in the order that the chips get read out):
Hybrid 5Z3 has die: 108-007 108-022 108-024 114-003 113-023

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 5z3 classification info. Created 13:59:10 12/13/99

Hybrid 5z3 quality: fair
Chip classification: fair fair fair good good
Bad channels (chip-channel): 1-73
Bad cells: none
Random bad capacitors (chip-cell-channel): 0-1-81 1-29-58 2-38-55
Channels at pedestal needed for DCMS: 36.7 36.7 38.6 33.8 37.7
```

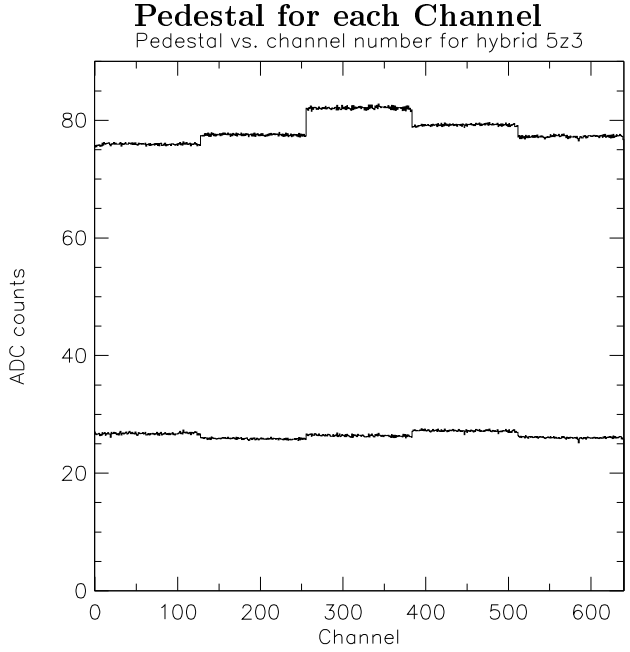
4 Comments

HV test. Has Au FE DVDD and DGND wirebonds. Encapsulated.

5 Pedestal

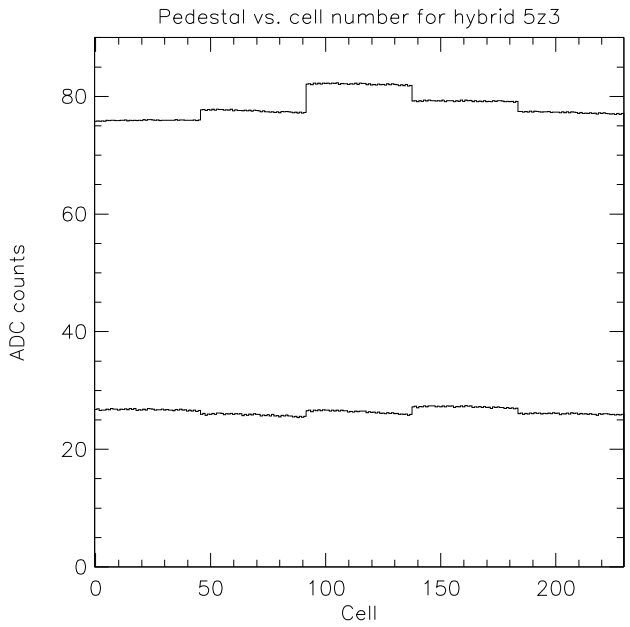
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

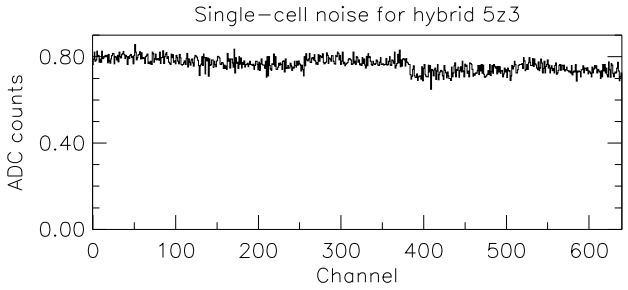
Pedestal vs. Pipeline Cell ID

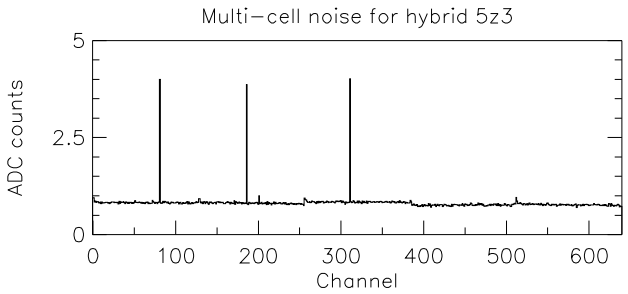


6 Noise

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

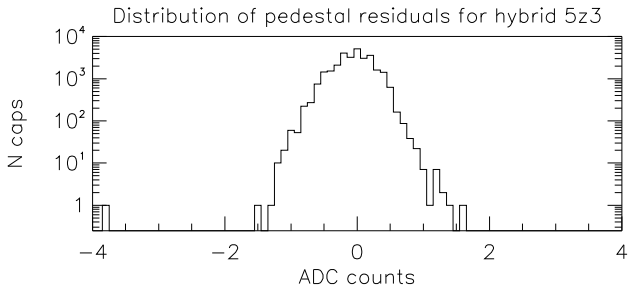
RMS Noise

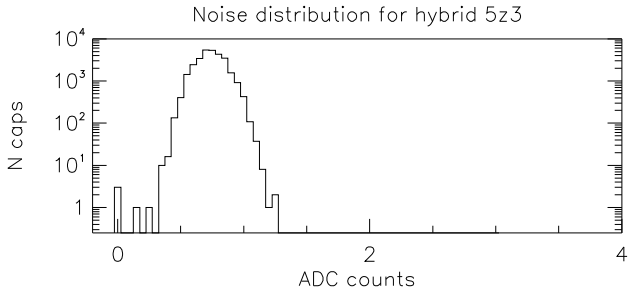




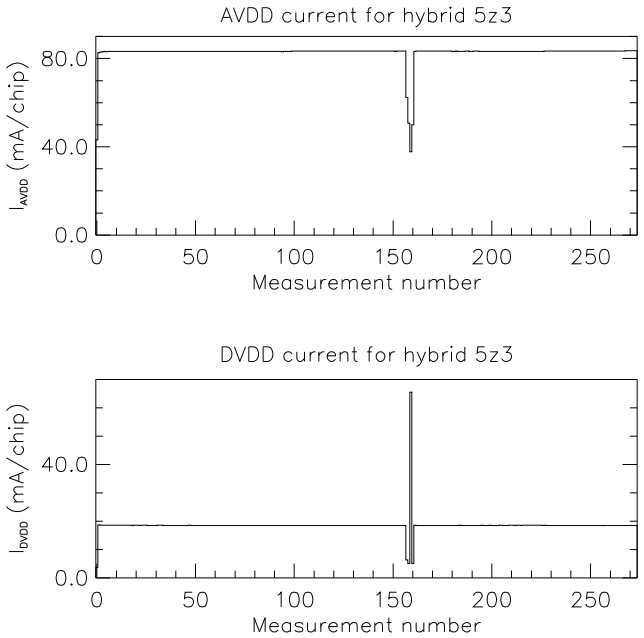
The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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