Hybrid 4z119 Traveler

February 17, 2000

1 Connectivity

Repairs on shorts:

Fixes for opens:dgnd open to chip 4, fixed with w/b to trace on hybrid.

2 Chips

The following chips were assembled on this hybrid (in the order that the chips get read out):
Hybrid 4Z119 has die: 149-042 149-043 149-045 149-046

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 4z119 classification info. Created 08:54:32 12/06/99

Hybrid 4z119 quality: good
Chip classification: good good good good
Bad channels: none
Bad cells: none
Random bad capacitors: none
Channels at pedestal needed for DCMS: 29.7 29.7 29.7 32.8
```

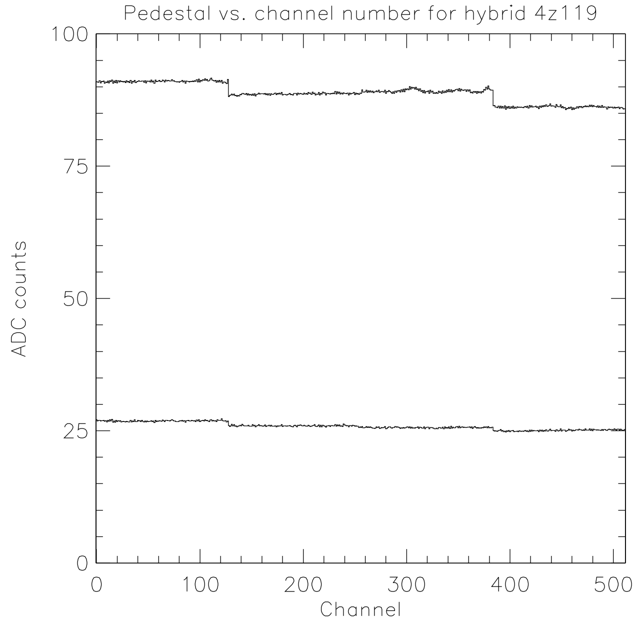
4 Comments

Encapsulated. Has redundant FE DVDD and DGND wirebonds. HV tested. 100 nA current drawn by green board, but hybrid is OK. Green board to hybrid HV bond has been pulled though. Traces on jumper field have a tendency to lift.

5 Pedestal

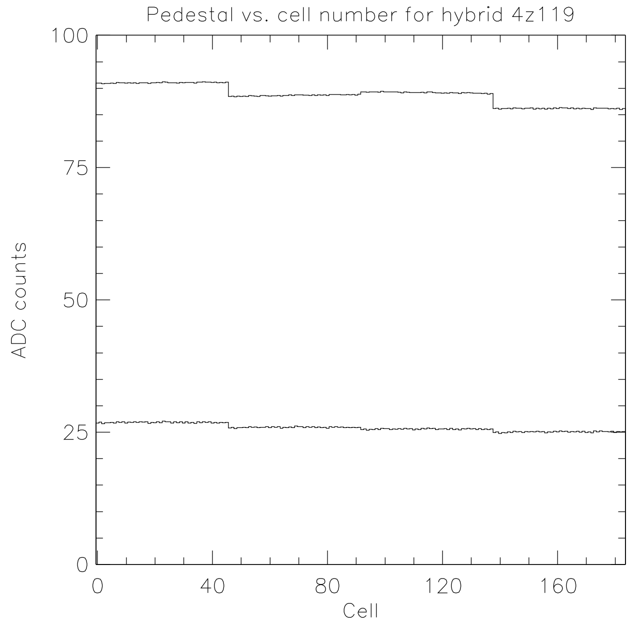
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

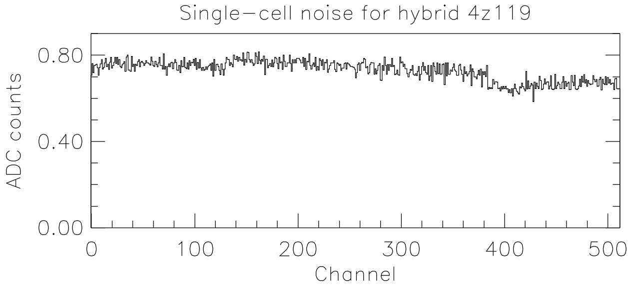
Pedestal vs. Pipeline Cell ID

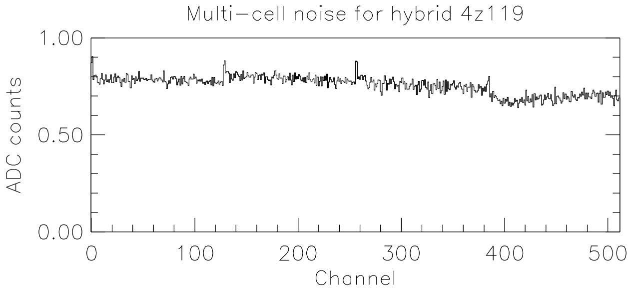


6 Noise

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

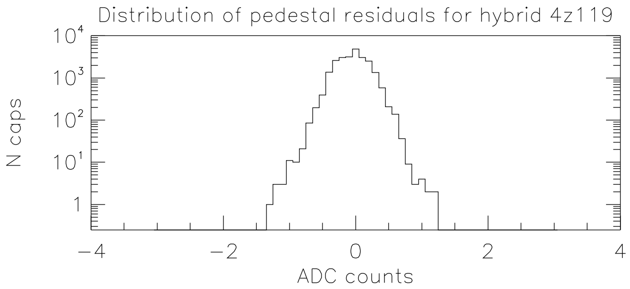
RMS Noise

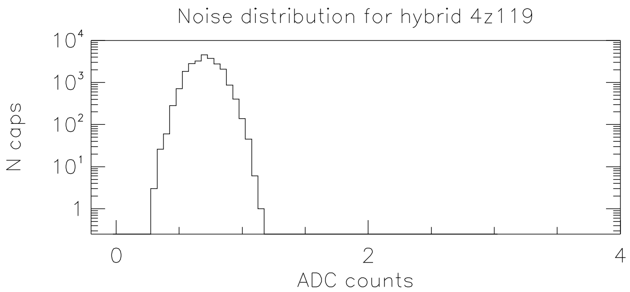




The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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