Hybrid 4z39 Traveler

February 11, 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 4Z39 has die: 002-041 002-042 002-043 002-044

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 4z39 classification info. Created 12:49:25 02/06/00

Hybrid 4z39 quality: fair
Chip classification: good fair fair good
Bad channels (chip-channel): 1-27 2-9
Bad cells: none
Random bad capacitors (chip-cell-channel): 2-15-92 2-16-95 2-26-125
   2-30-63 2-32-63 2-33-63 2-34-63 2-35-63 2-36-63 2-37-63 2-38-63
   2-4-60 2-40-63 2-41-63 2-5-63
Channels at pedestal needed for DCMS: 30.6 30.6 31.6 29.6
```

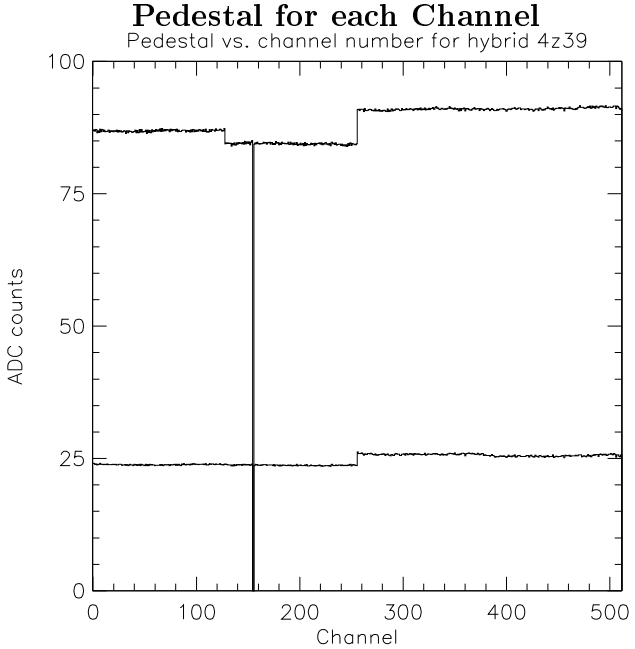
4 Comments

Encapsulated. FE DV finger gold bonds. HV tested.

5 Pedestal

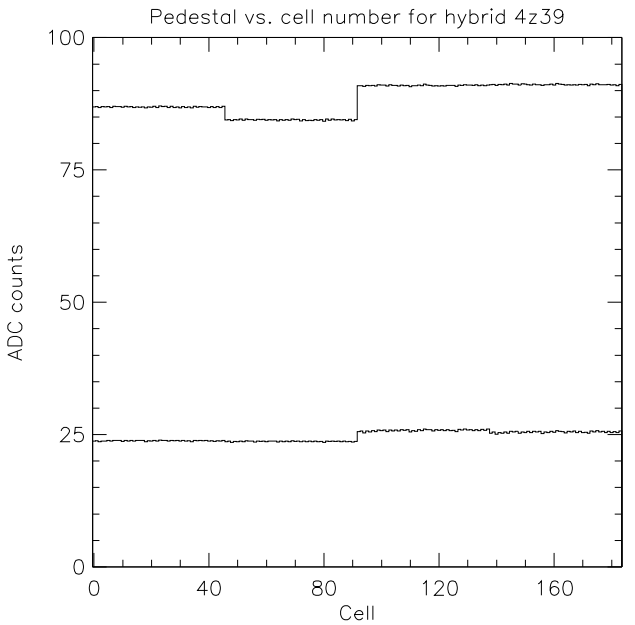
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

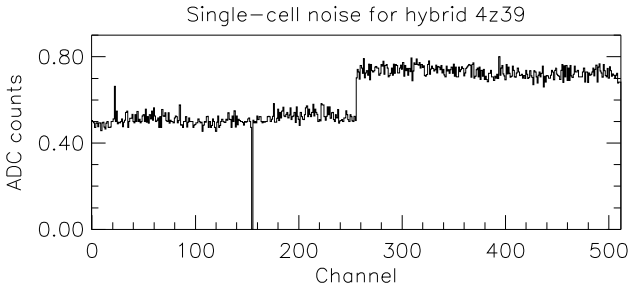
Pedestal vs. Pipeline Cell ID

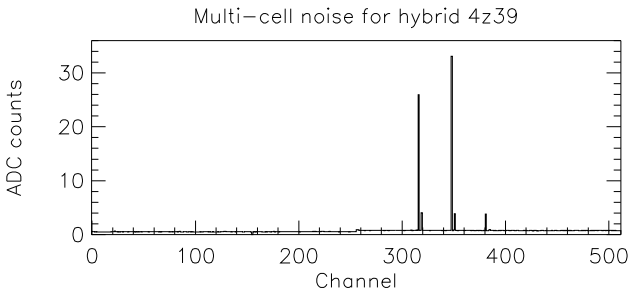


6 Noise

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

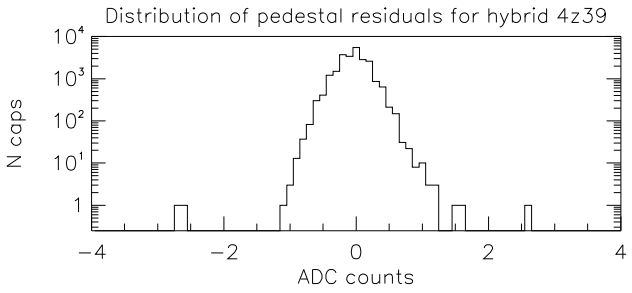
RMS Noise

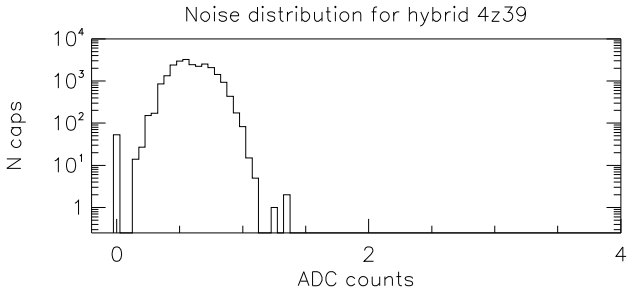




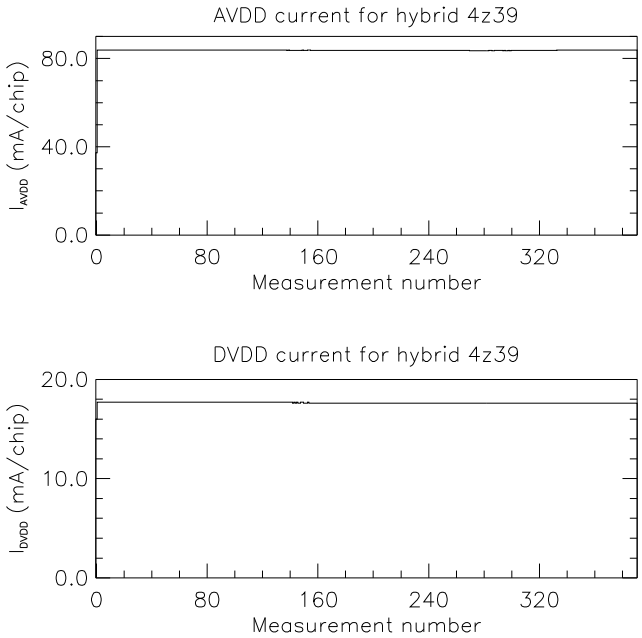
The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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