Hybrid 4z242 Traveler

March 21, 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 4Z242 has die: 173-028 173-029 173-036 173-040

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 4z242 classification info. Created 12:31:07 03/03/00

Hybrid 4z242 quality: fair
Chip classification: fair fair fair good
Bad channels (chip-channel): 0-79 2-46 2-109
Bad cells: none
Random bad capacitors (chip-cell-channel): 0-1-80 0-1-81 0-12-80
   0-12-81 0-13-81 0-25-81 0-3-80 0-3-81 0-38-80 0-38-81 0-42-80
   0-42-81 0-43-81 0-45-80 0-45-81 1-31-95 1-32-58 1-38-102 1-44-19
   1-45-84 2-13-110
Channels at pedestal needed for DCMS: 29.5 32.6 32.6 31.5
```

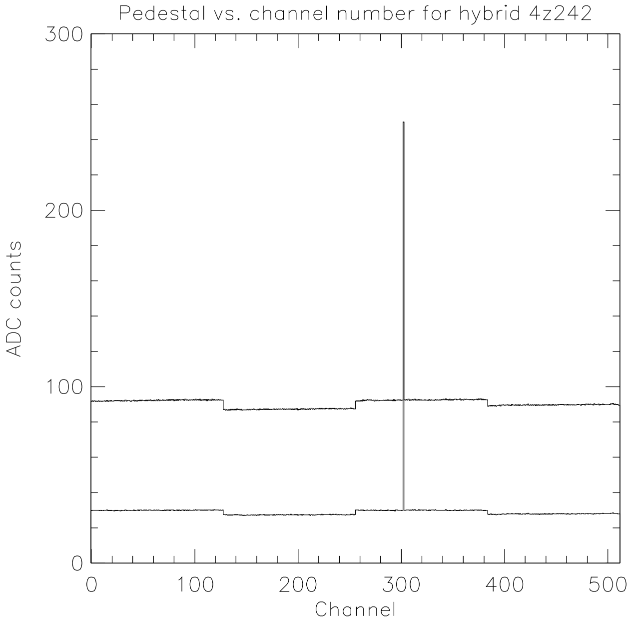
4 Comments

Encapsulated. FE DV finger gold bonds. HV tested.

5 Pedestal

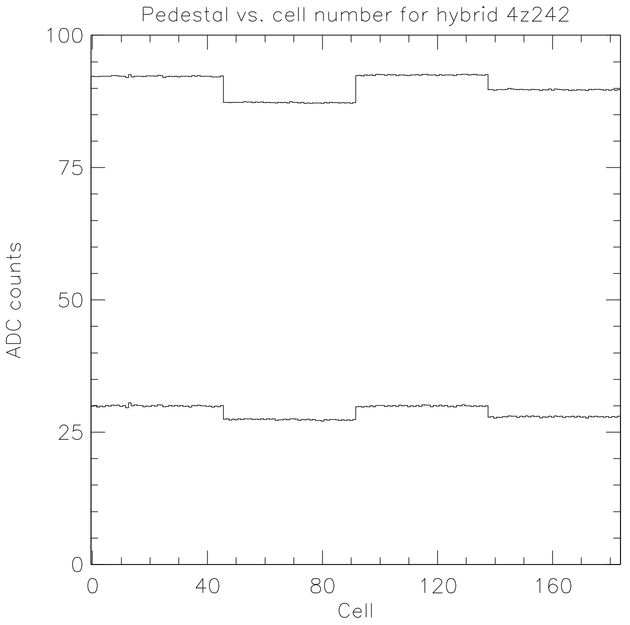
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

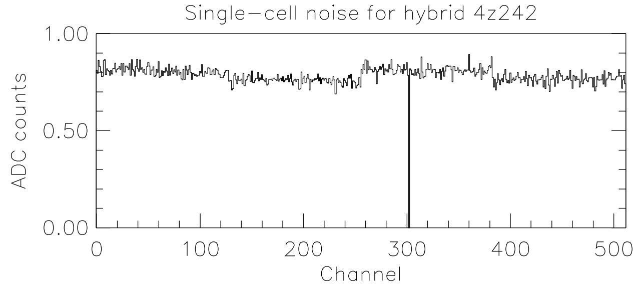
Pedestal vs. Pipeline Cell ID

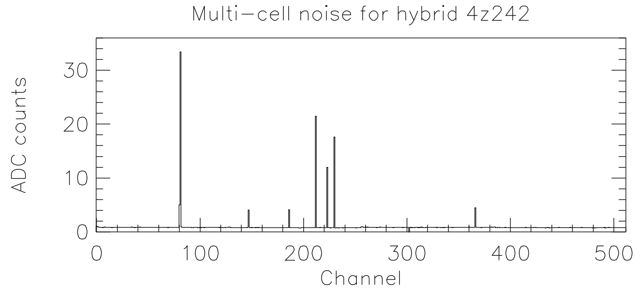


6 Noise

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

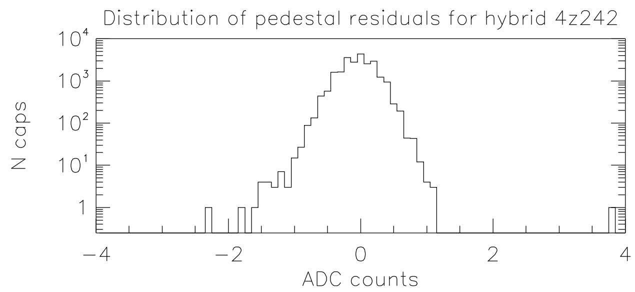
RMS Noise

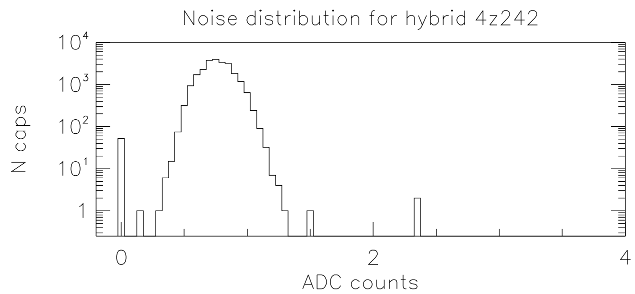




The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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