Hybrid 4z19 Traveler

January 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 4Z19 has die: 192-008 192-009 192-012 192-013

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 4z19 classification info. Created 13:56:52 01/10/00

Hybrid 4z19 quality: fair
Chip classification: fair good fair fair
Bad channels (chip-channel): 2-0 3-84
Bad cells: none
Random bad capacitors (chip-cell-channel): 0-12-76 2-1-0 2-10-0
   2-13-0 2-14-0 2-15-0 2-16-0 2-17-0 2-23-0 2-24-0 2-25-0
   2-27-0 2-28-0 2-29-0 2-3-0 2-30-0 2-31-0 2-35-0 2-36-0
   2-37-0 2-44-0 2-45-0 2-8-0
Channels at pedestal needed for DCMS: 28.7 27.7 27.5 30.6
```

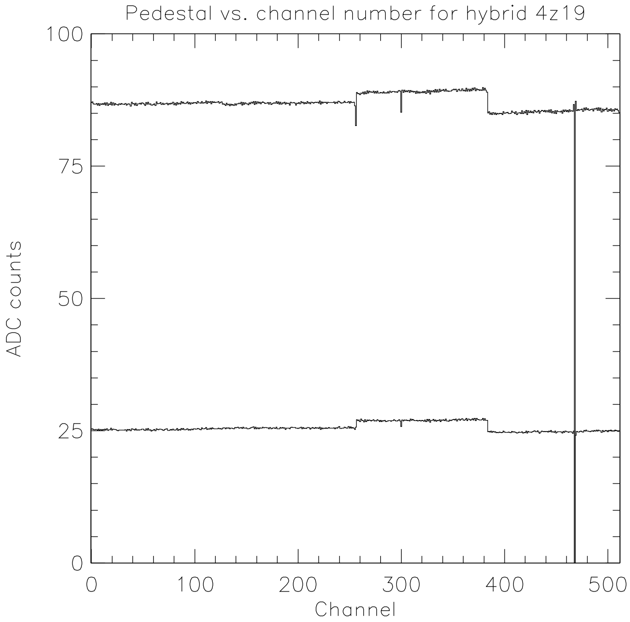
4 Comments

Has Au FE DDVD and DGND bonds.
HV test.

5 Pedestal

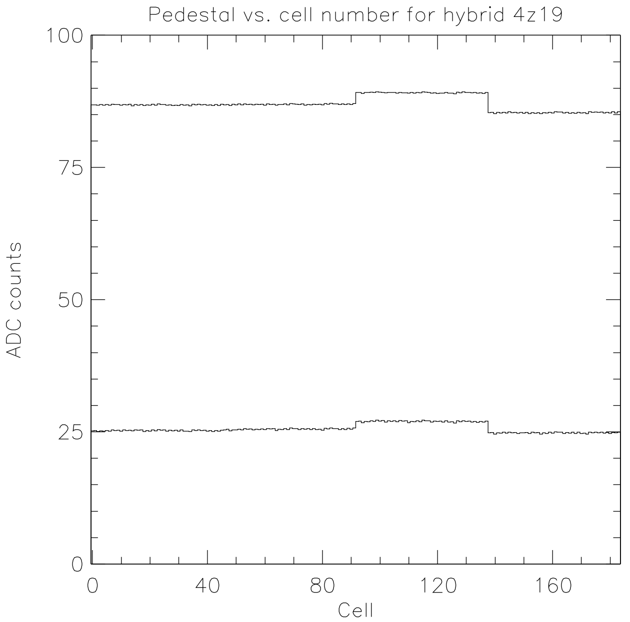
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

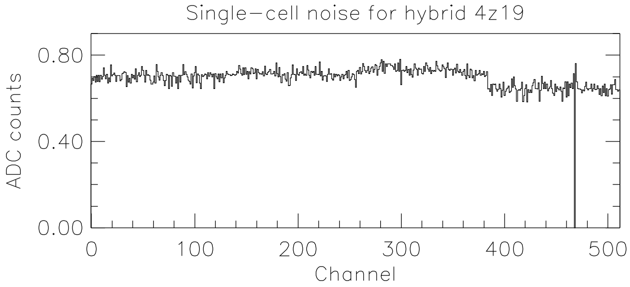
Pedestal vs. Pipeline Cell ID

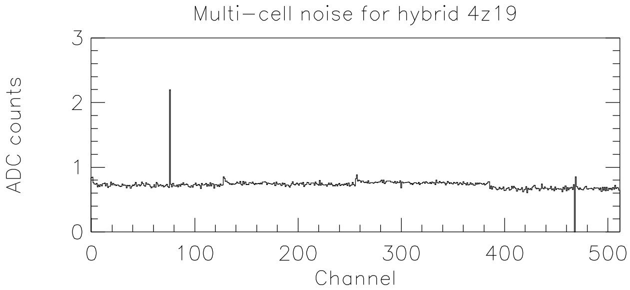


6 Noise

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

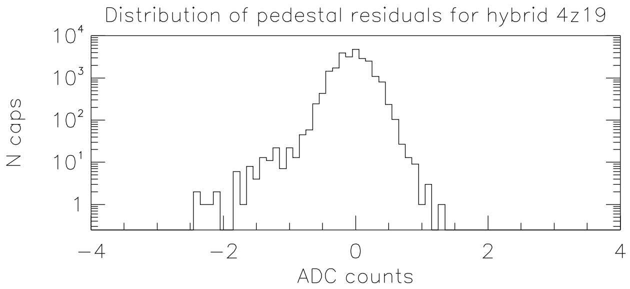
RMS Noise

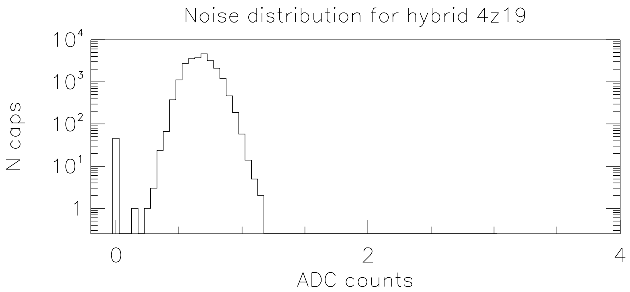




The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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