Hybrid 3z99 Traveler

January 4, 2000

1 Connectivity

Repairs on shorts:

Fixes for opens:
HV open on hybrid fixed with wire from HV resistor to HV capacitor.

2 Chips

The following chips were assembled on this hybrid (in the order that the chips get read out):
Hybrid 3Z99 has die: 199-030 199-032 199-033

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 3z99 classification info. Created 12:21:03 12/21/99

Hybrid 3z99 quality: fair
Chip classification: fair good fair
Bad channels (chip-channel): 2-97
Bad cells: none
Random bad capacitors (chip-cell-channel): 0-18-114 0-18-115 0-19-114
   0-2-114 0-3-114 0-31-114 0-45-114 0-45-115 0-5-114 0-5-115 0-7-114
   0-7-115 0-9-114 0-9-115 2-24-28
Channels at pedestal needed for DCMS: 24.2 30.3 28.7
```

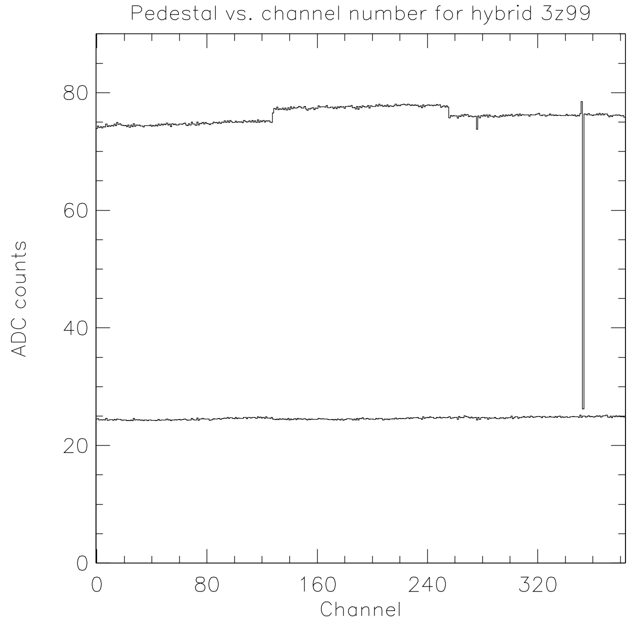
4 Comments

Green Board loose, fixed.
Has Au DVDD and DGND wirebonds.
HV Test.

5 Pedestal

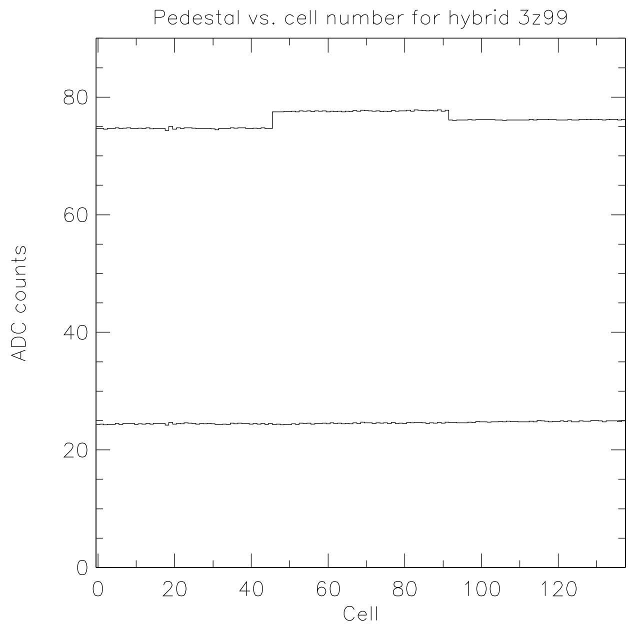
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

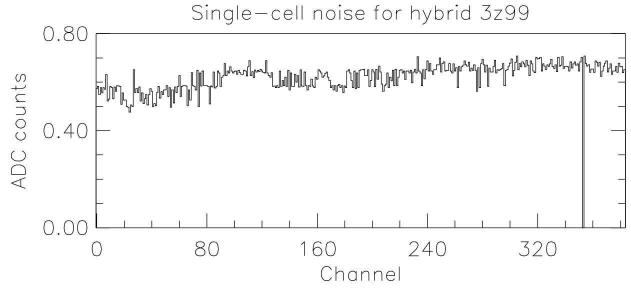
Pedestal vs. Pipeline Cell ID

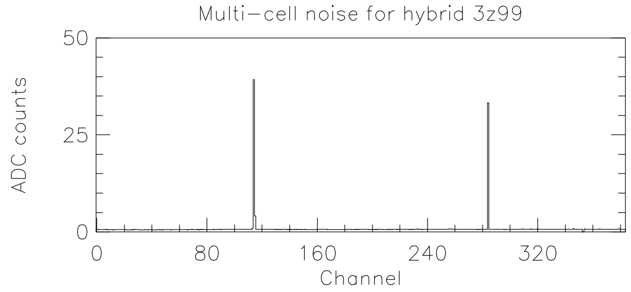


6 Noise

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

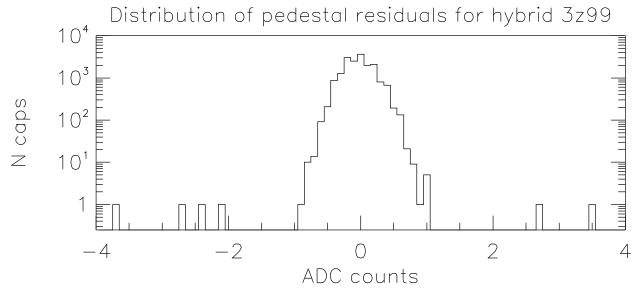
RMS Noise

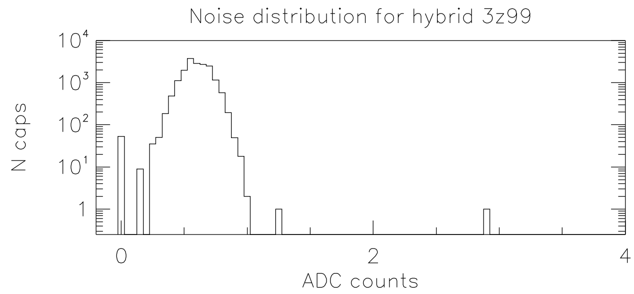




The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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