Hybrid 3z68 Traveler

December 17, 1999

1 Connectivity

Repairs on shorts:

Fixes for opens: AVDD open on Chip2 and CHMODE open on Chip 3 (known opens). Fixed.

2 Chips

The following chips were assembled on this hybrid (in the order that the chips get read out):
Hybrid 3Z68 has die: 055-036 055-038 055-040

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 3z68 classification info. Created 17:19:57 12/03/99

Hybrid 3z68 quality: fair
Chip classification: good good fair
Bad channels: none
Bad cells: none
Random bad capacitors (chip-cell-channel): 2-22-36 2-22-37 2-25-36
   2-25-37 2-26-37 2-28-36 2-28-37 2-30-36 2-30-37 2-32-36 2-32-37
   2-36-3 2-36-4 2-36-5 2-41-36 2-41-37 2-42-37 2-43-37 2-8-36
   2-8-37
Channels at pedestal needed for DCMS: 34.6 32.7 33.7
```

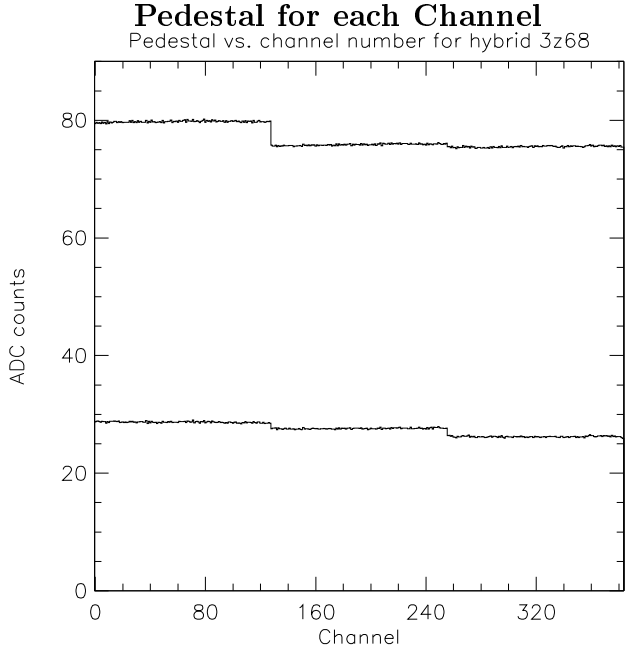
4 Comments

Has redundant FE DVDD and DGND wirebonds.

5 Pedestal

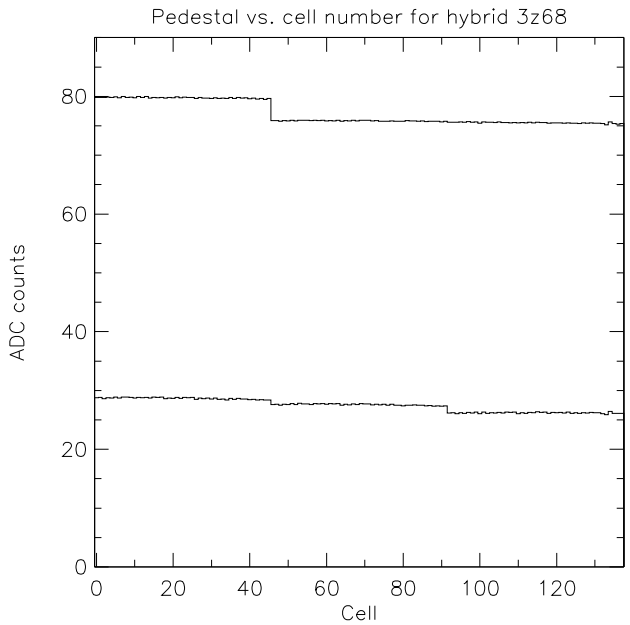
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

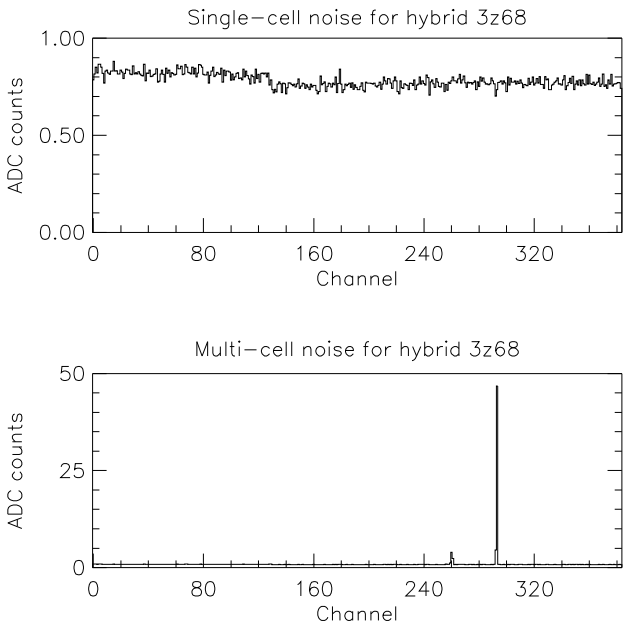
Pedestal vs. Pipeline Cell ID



6 Noise

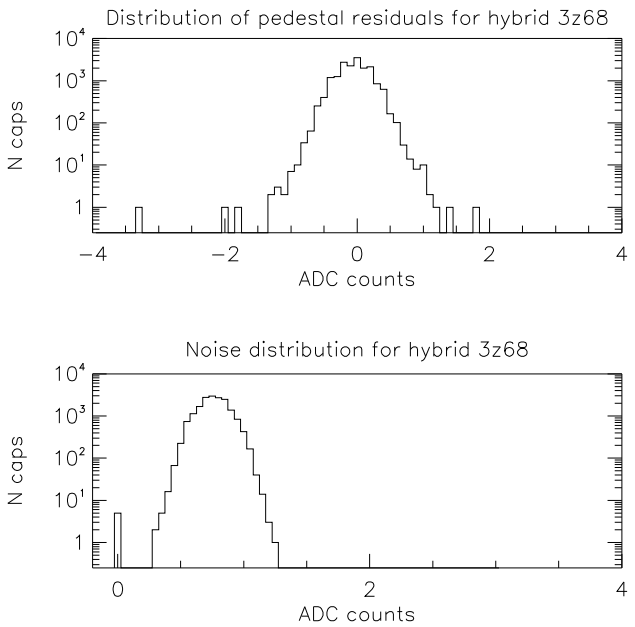
The following plots show the single-cell and multi-cell RMS noise:

RMS Noise

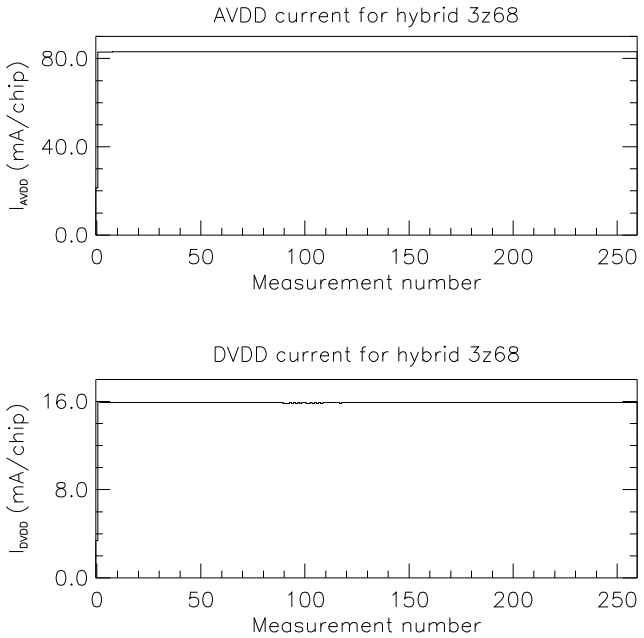


The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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