Hybrid 7z89 Traveler

April 13, 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 7Z89 has die: 229-084 229-085 229-089 229-090 229-093 229-094 229-095

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 7z89 classification info. Created 10:12:28 04/11/00

Hybrid 7z89 quality: fair*
Chip classification: fair* fair fair fair fair fair fair
Bad channels (chip-channel): 0-26 0-94 0-95 0-96 1-46 2-29 3-75 5-31 5-86 6-6
Bad cells: none
Random bad capacitors (chip-cell-channel): 2-17-72 2-2-48 2-41-6
   3-0-10 3-0-11 3-0-8 3-0-9 3-1-10 3-1-9 3-16-10 3-16-11
   3-16-8 3-16-9 3-17-10 3-17-9 3-3-10 3-3-9 3-42-10 3-42-11
   3-42-8 3-42-9 3-5-10 3-5-11 3-5-8 3-5-9 3-7-10 3-7-9
   4-26-119 5-21-0
Channels at pedestal needed for DCMS: 34.8 35.7 38.7 35.8 34.5 34.5 37.0
```

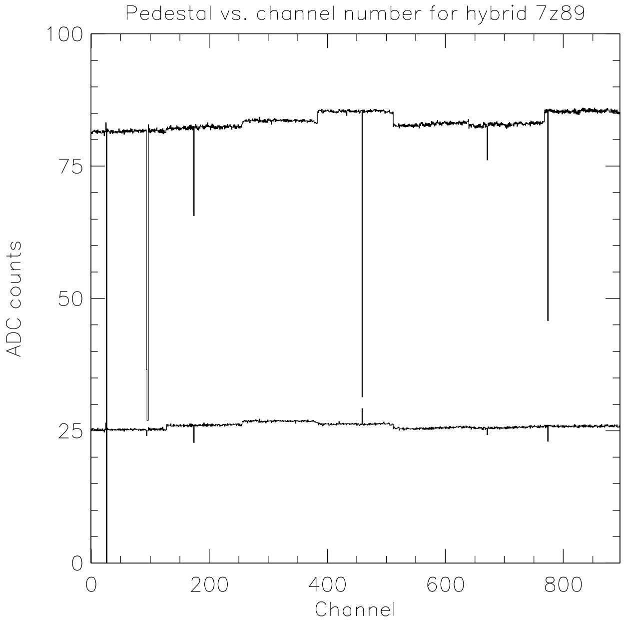
4 Comments

Encapsulated. FE DV finger gold bonds. HV tested.

5 Pedestal

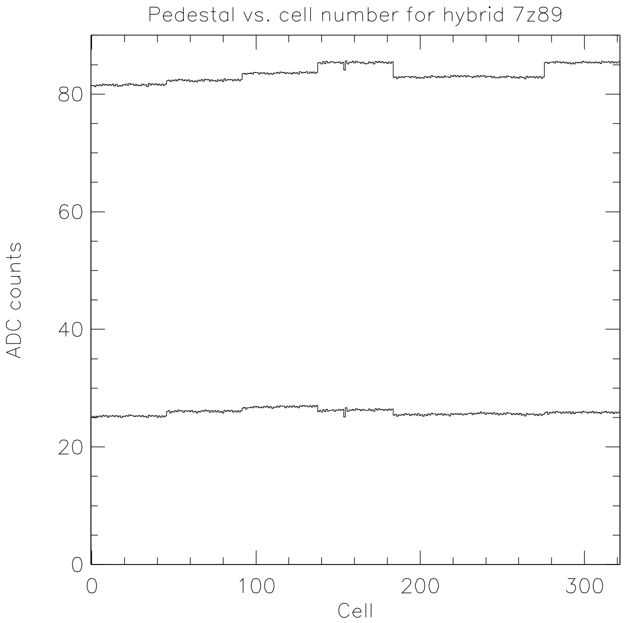
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

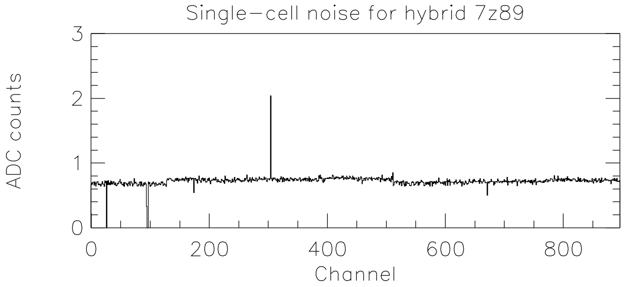
Pedestal vs. Pipeline Cell ID

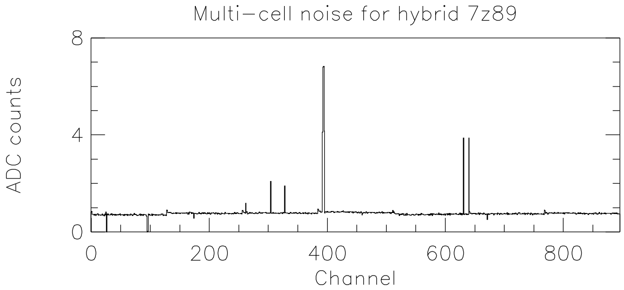


6 Noise

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

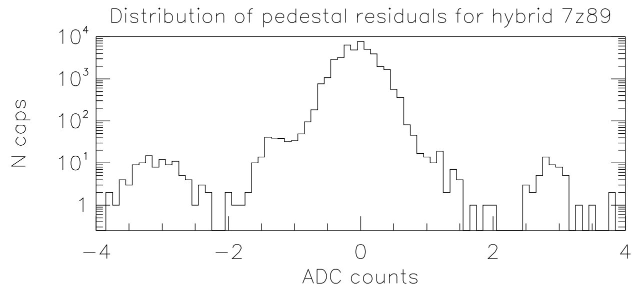
RMS Noise

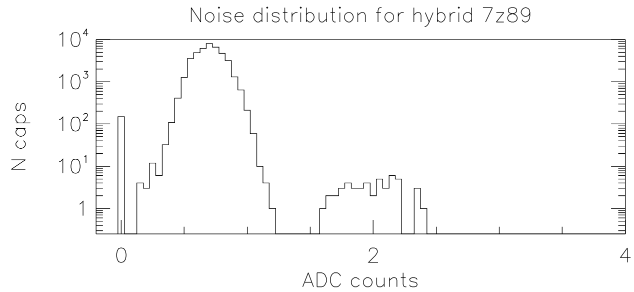




The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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