Hybrid 7z80 Traveler

May 23, 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 7Z80 has die: 203-057 203-058 203-059 203-062 203-065 203-066 203-067

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 7z80 classification info. Created 16:48:12 05/22/00

Hybrid 7z80 quality: fair
Chip classification: fair fair fair good fair good good
Bad channels (chip-channel): 0-119
Bad cells: none
Random bad capacitors (chip-cell-channel): 1-42-55 1-42-56 1-42-57
   2-13-18 2-6-24 4-34-98 4-42-76
Channels at pedestal needed for DCMS: 31.2 31.6 30.7 32.3 31.7 32.6 31.7
```

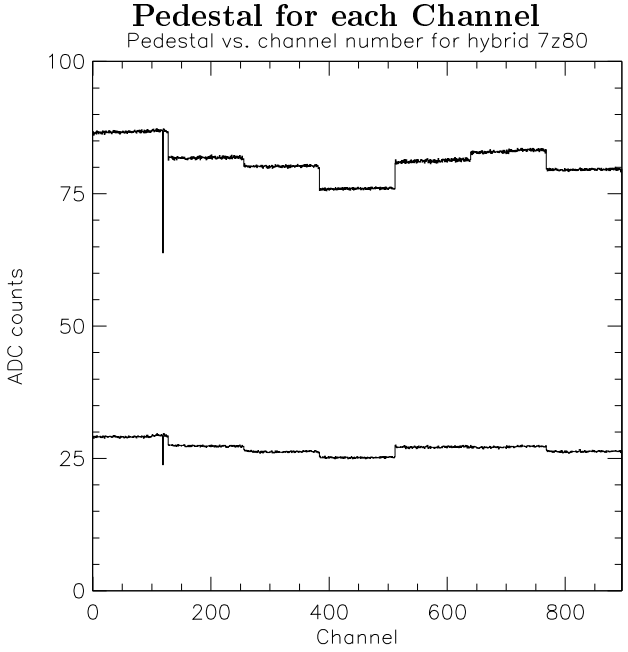
4 Comments

Encapsulated. FE DV finger gold bonds. HV tested.

5 Pedestal

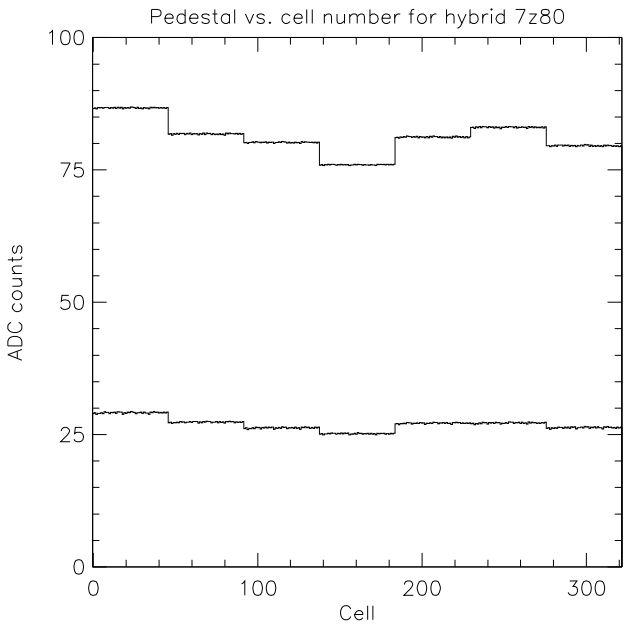
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

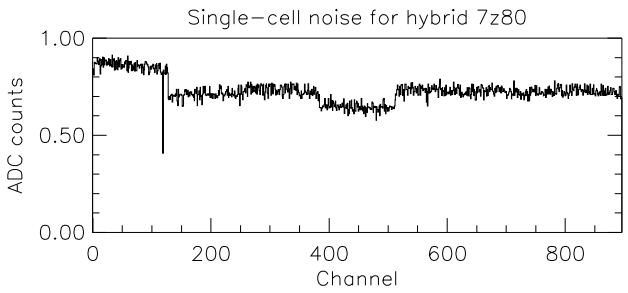
Pedestal vs. Pipeline Cell ID

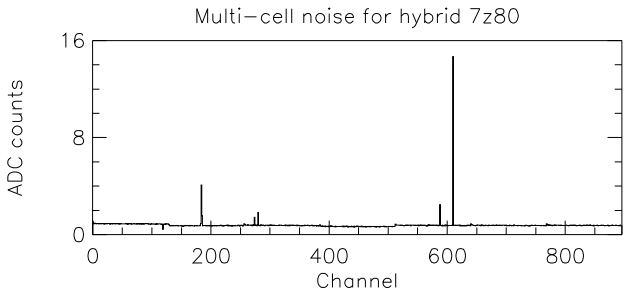


6 Noise

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

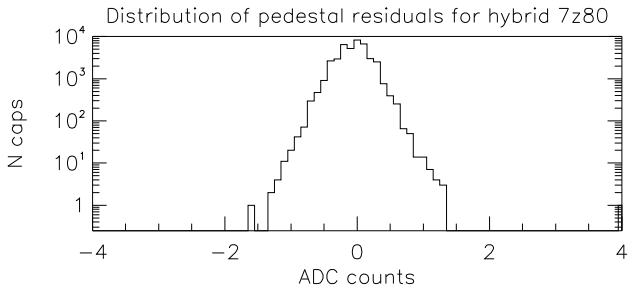
RMS Noise

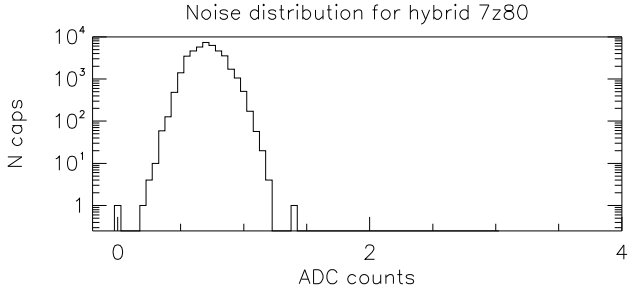




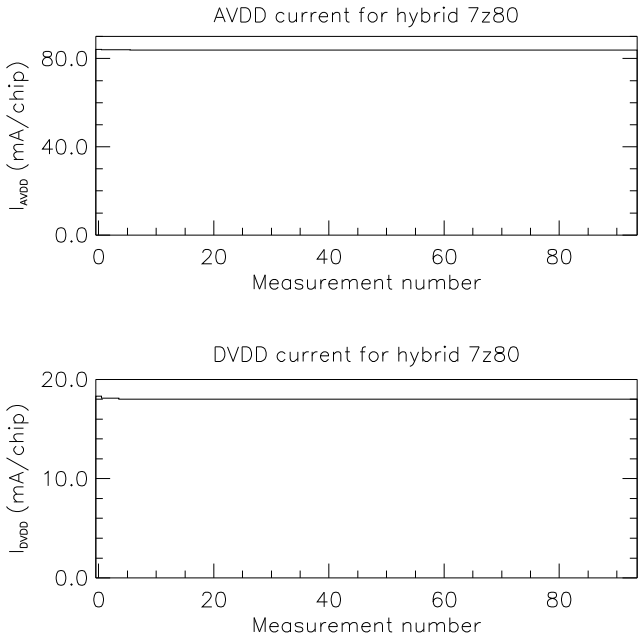
The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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