Hybrid 7z110 Traveler

June 27, 2000

1 Connectivity

Repairs on shorts:
Fixes for opens: Bus 5B open to Chip 1 (known open).

2 Chips

The following chips were assembled on this hybrid (in the order that the chips get read out):
Hybrid 7Z110 has die: 180-105 180-106 180-107 180-109 180-110 180-112 180-104

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 7z110 classification info. Created 09:17:00 06/26/00

Hybrid 7z110 quality: fair
Chip classification: good good good fair good fair good
Bad channels (chip-channel): 3-43 3-75 5-34
Bad cells: none
Random bad capacitors (chip-cell-channel): 3-21-119 3-22-114 3-22-115
Channels at pedestal needed for DCMS: 35.6 33.6 34.3 33.0 34.6 34.5 34.6
```

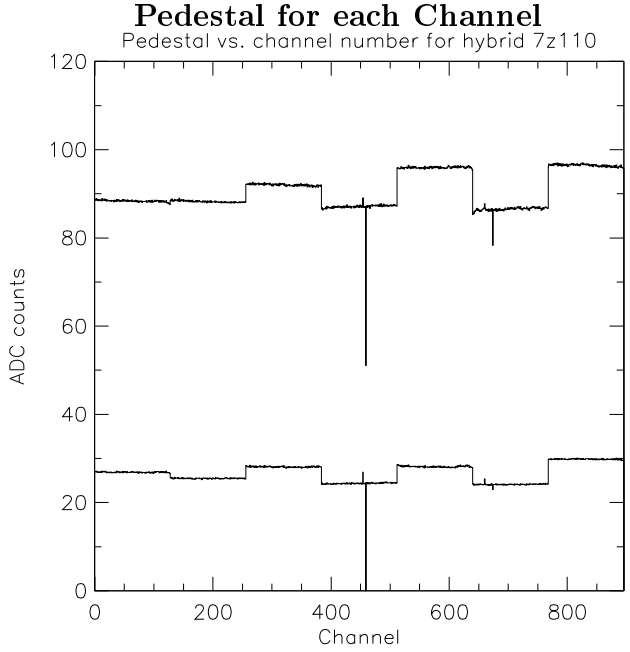
4 Comments

Encapsulated. FE DV finger gold bonds. HV tested.
Chip 4 replaced. Finger 6 replaced.

5 Pedestal

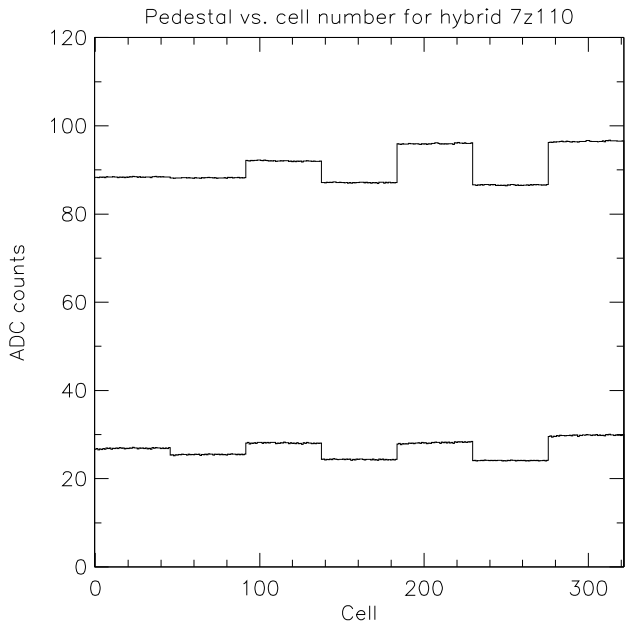
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

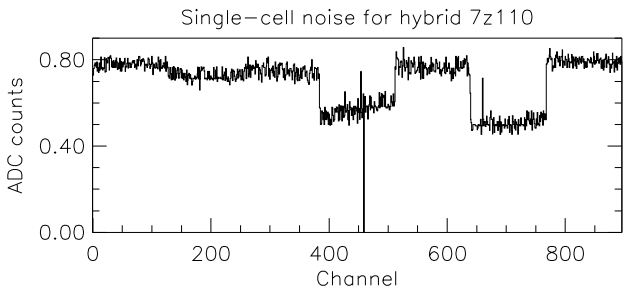
Pedestal vs. Pipeline Cell ID

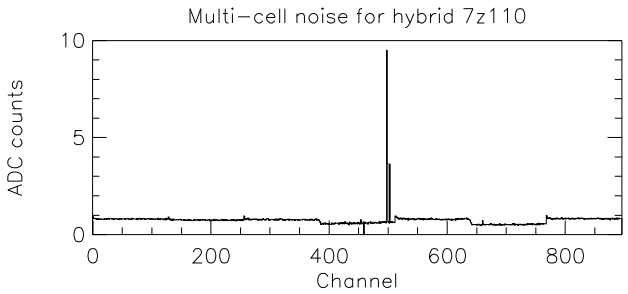


6 Noise

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

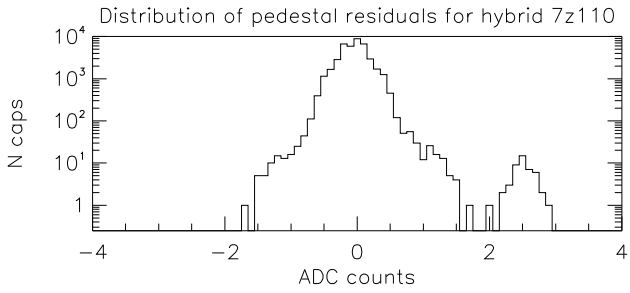
RMS Noise

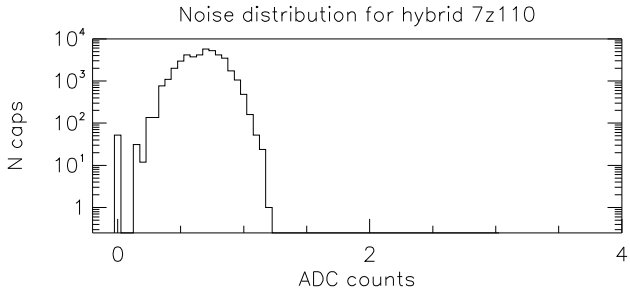




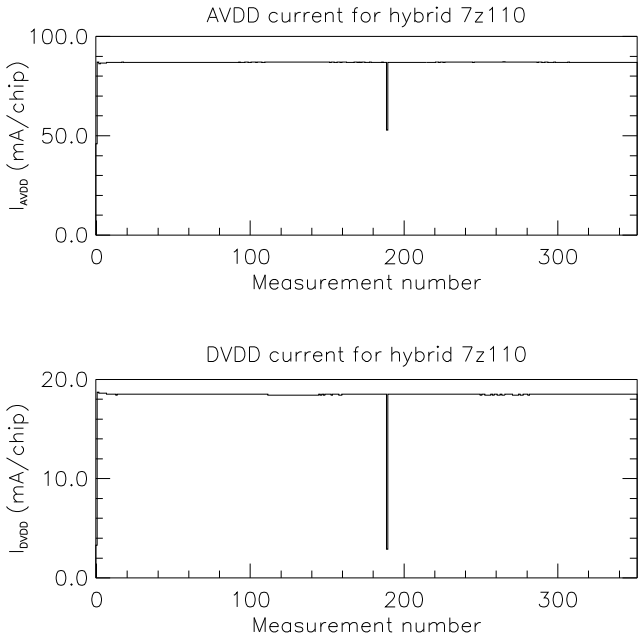
The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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