Hybrid 7z2 Traveler

May 19, 2000

1 Connectivity

Repairs on shorts:
Fixes for opens: PRD2 with soldered wire. HV with soldered wire.

2 Chips

The following chips were assembled on this hybrid (in the order that the chips get read out):
Hybrid 7Z2 has die: 246-105 246-106 246-111 246-112 246-114 246-116 246-120

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 7z2 classification info. Created 09:27:43 05/18/00

Hybrid 7z2 quality: fair*
Chip classification: good fair good good fair* fair good
Bad channels (chip-channel): 1-31 4-22 4-117 4-126 5-6 5-71
Bad cells: none
Random bad capacitors: none
Channels at pedestal needed for DCMS: 31.7 32.7 31.5 32.6 30.7 34.6 30.7
```

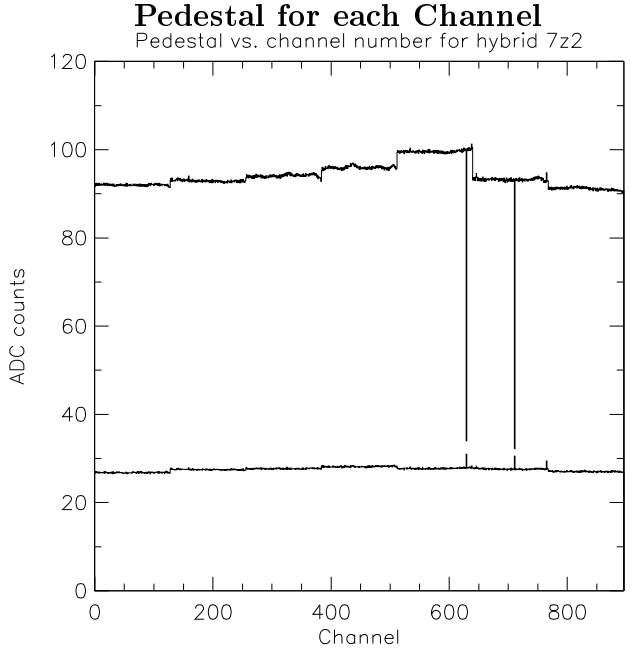
4 Comments

Encapsulated. FE DV finger gold bonds. HV tested.

5 Pedestal

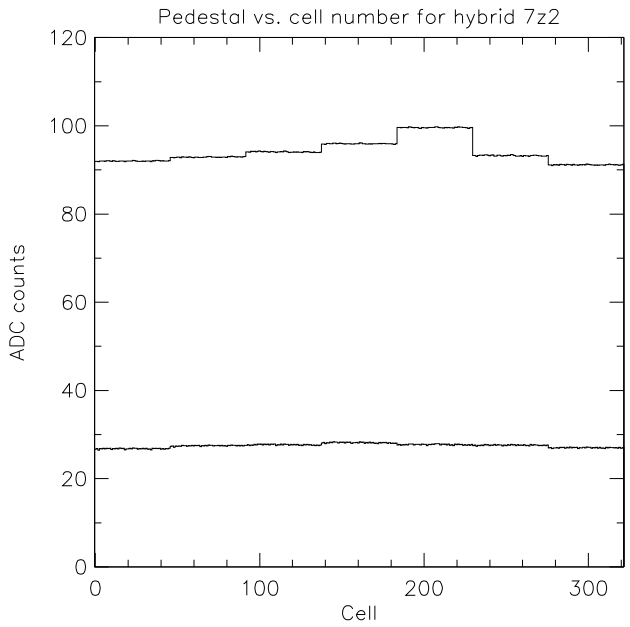
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

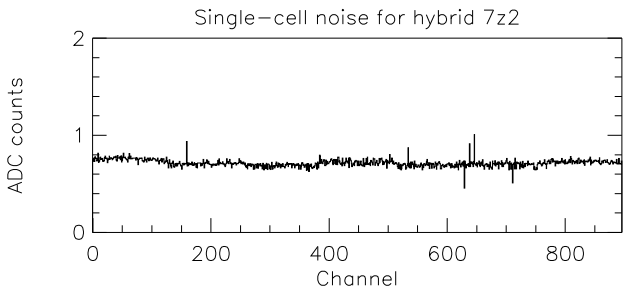
Pedestal vs. Pipeline Cell ID

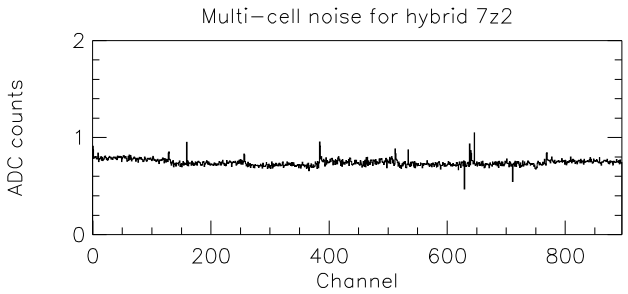


6 Noise

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

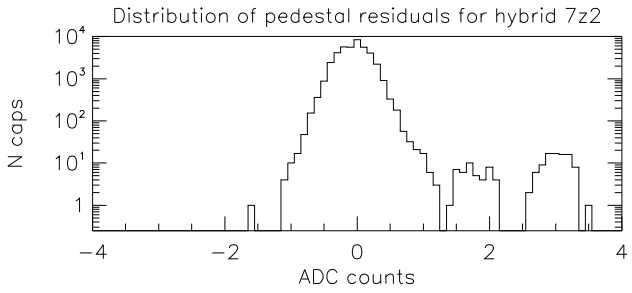
RMS Noise

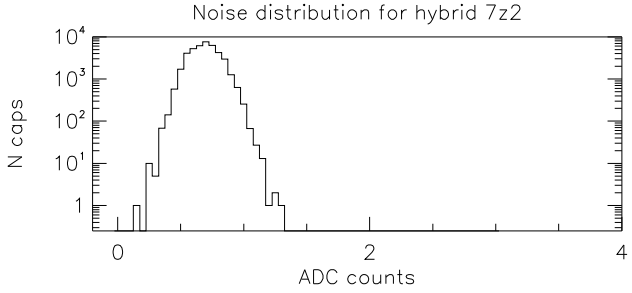




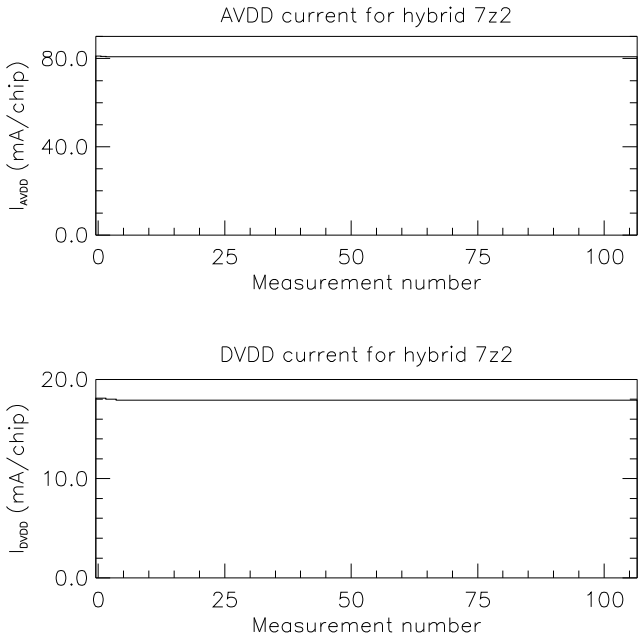
The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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