Hybrid 7p109 Traveler

June 30, 2000

1 Connectivity

Repairs on shorts:
Fixes for opens: Hv open. Fixed. DVB open to leftmost connector field. Fixed.

2 Chips

The following chips were assembled on this hybrid (in the order that the chips get read out):
Hybrid 7P109 has die: 239-011 239-015 239-016 239-023 239-024 239-038 239-041

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 7p109 classification info. Created 08:42:35 06/29/00

Hybrid 7p109 quality: fair
Chip classification: fair fair good good fair fair good
Bad channels (chip-channel): 1-61 4-44 4-56
Bad cells: none
Random bad capacitors (chip-cell-channel): 0-28-11 4-35-43 4-35-45
   5-31-40
Channels at pedestal needed for DCMS: 29.7 29.6 28.6 27.7 28.9 30.5 29.8
```

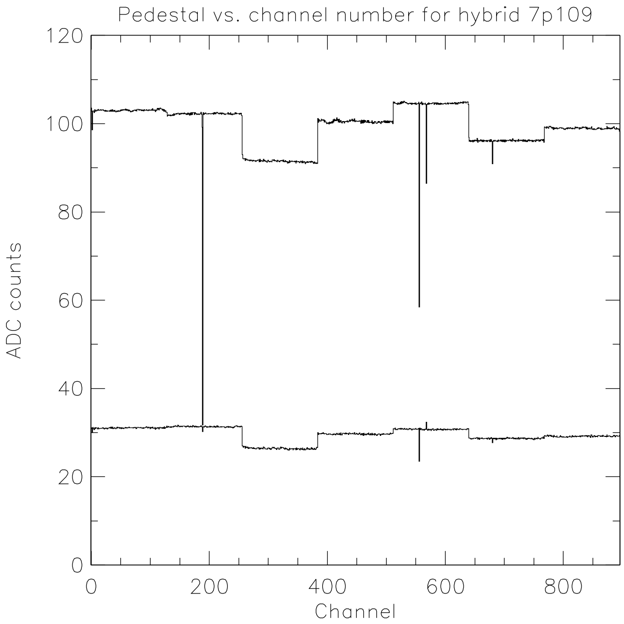
4 Comments

Encapsulated. FE DV finger gold bonds. HV tested. Chip 3 replaced.

5 Pedestal

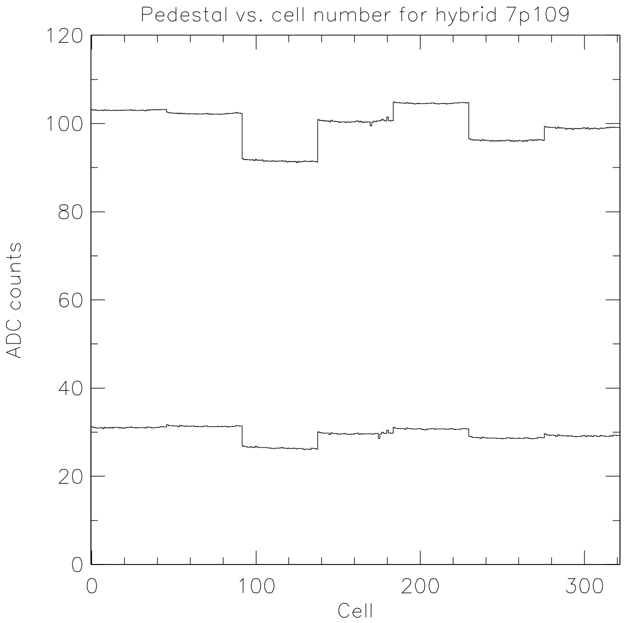
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

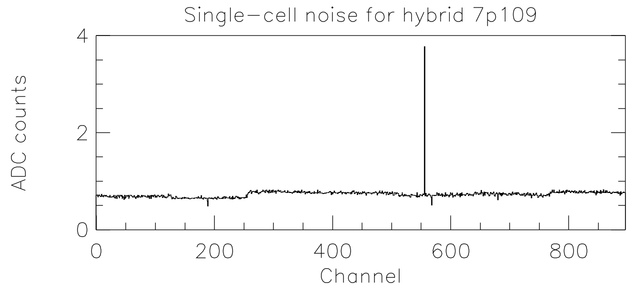
Pedestal vs. Pipeline Cell ID

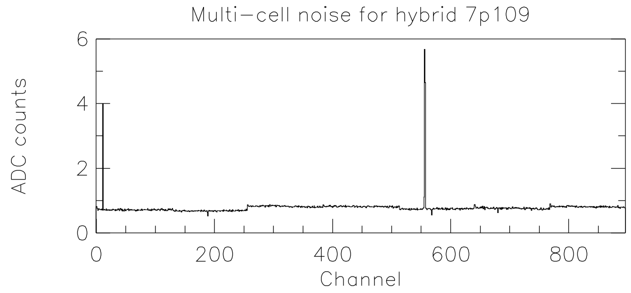


6 Noise

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

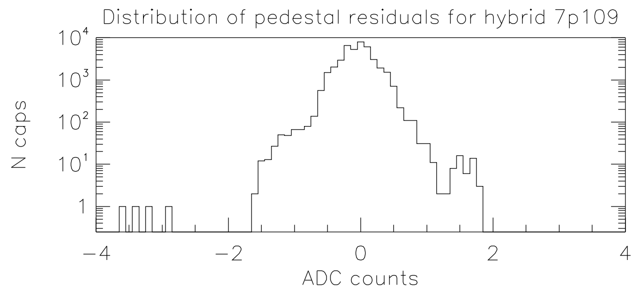
RMS Noise

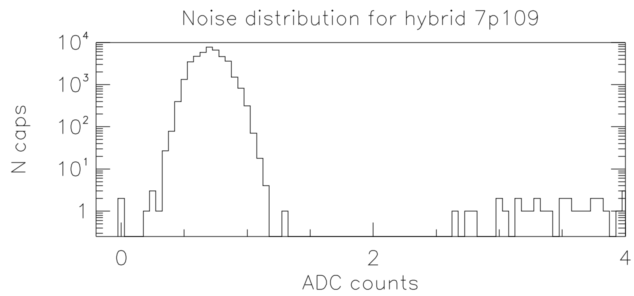




The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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