Hybrid 6p118 Traveler

January 19, 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 6P118 has die: 184-009 184-090 184-010 184-094 184-011 184-095

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 6p118 classification info. Created 16:50:57 01/17/00

Hybrid 6p118 quality: fair
Chip classification: good fair good fair good fair
Bad channels (chip-channel): 1-5 1-6 3-76
Bad cells: none
Random bad capacitors (chip-cell-channel): 1-19-92 1-30-22 1-39-98
   1-40-30 1-42-119 5-35-55
Channels at pedestal needed for DCMS: 33.6 34.6 33.6 33.6 30.7 37.7
```

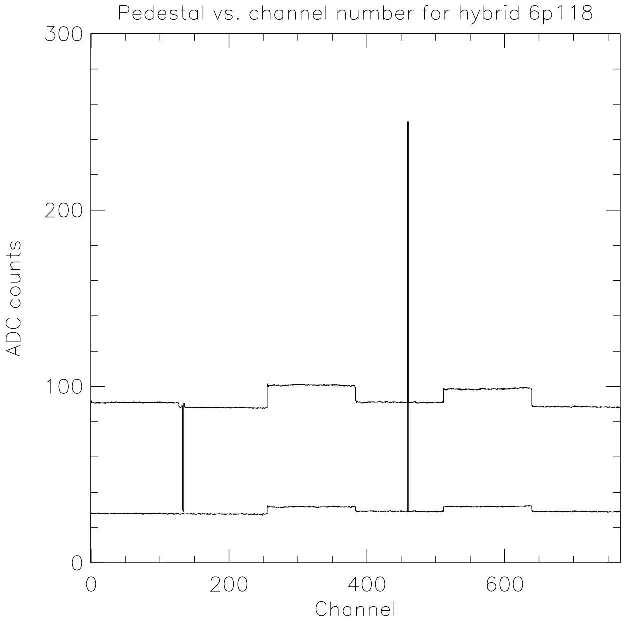
4 Comments

Hybrid operated through thermal-cycles for 1 month to test reliability of lot 9 and 12 die.
Automatic chip-to-chip bonds.

5 Pedestal

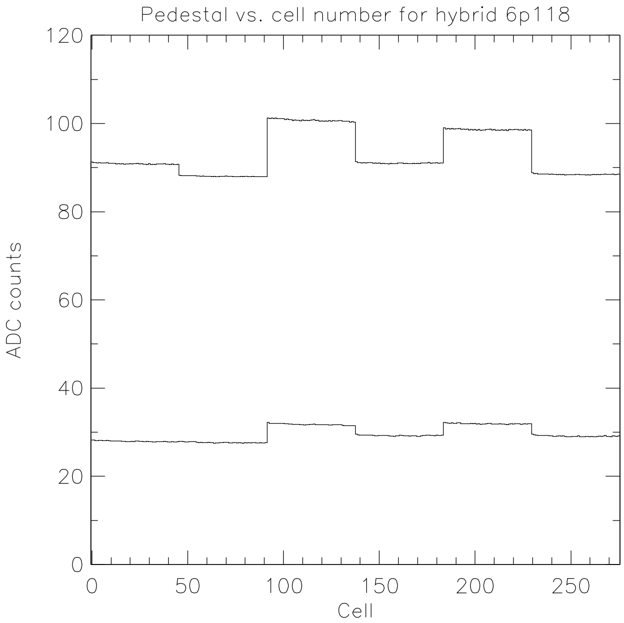
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

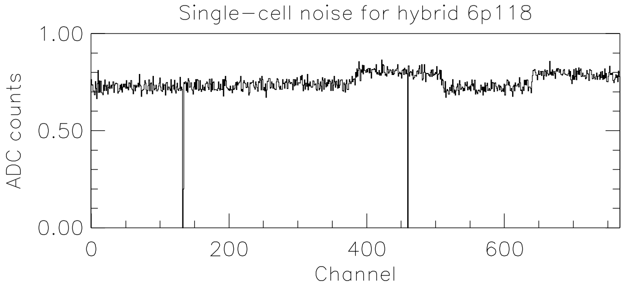
Pedestal vs. Pipeline Cell ID

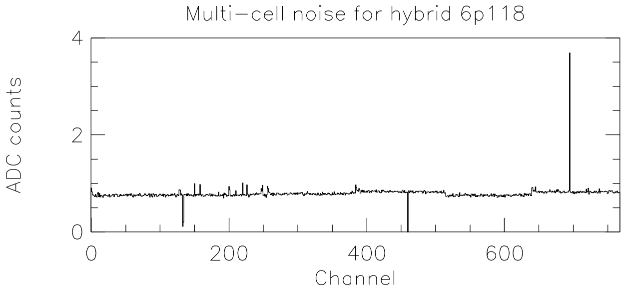


6 Noise

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

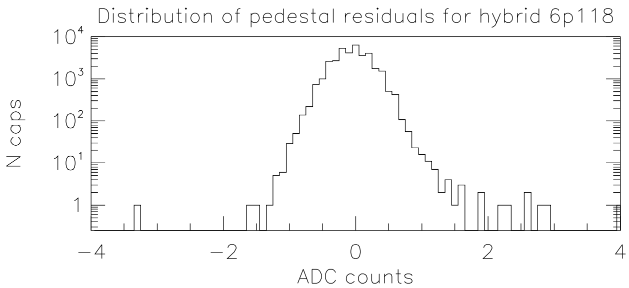
RMS Noise

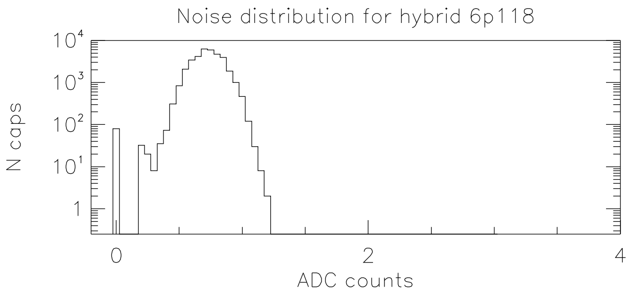




The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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