Hybrid 5z41 Traveler

February 3, 2000

1 Connectivity

Repairs on shorts:

Fixes for opens: First finger capacitor open, fixed with silver ink. PRD2 open on Chip 4; jumped from Chip 3.

2 Chips

The following chips were assembled on this hybrid (in the order that the chips get read out):
Hybrid 5Z41 has die: 047-038 204-003 047-030 110-050 110-051

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 5z41 classification info. Created 10:25:48 01/24/00

Hybrid 5z41 quality: fair
Chip classification: good good fair fair good
Bad channels (chip-channel): 2-98 3-97
Bad cells: none
Random bad capacitors: none
Channels at pedestal needed for DCMS: 36.6 33.7 37.7 38.8 38.5
```

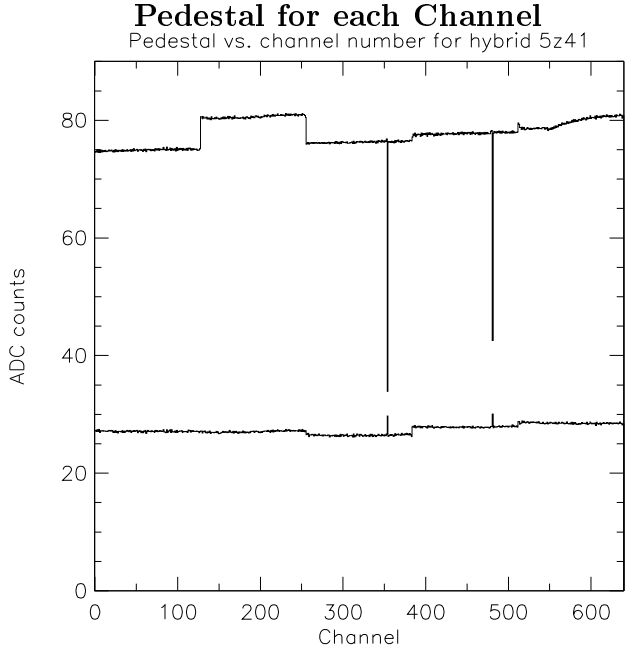
4 Comments

Encapsulated. FE DV finger gold bonds. HV tested.
Chip2 replaced. VTH resistor replaced on Fingers 2,3,4, and 5.

5 Pedestal

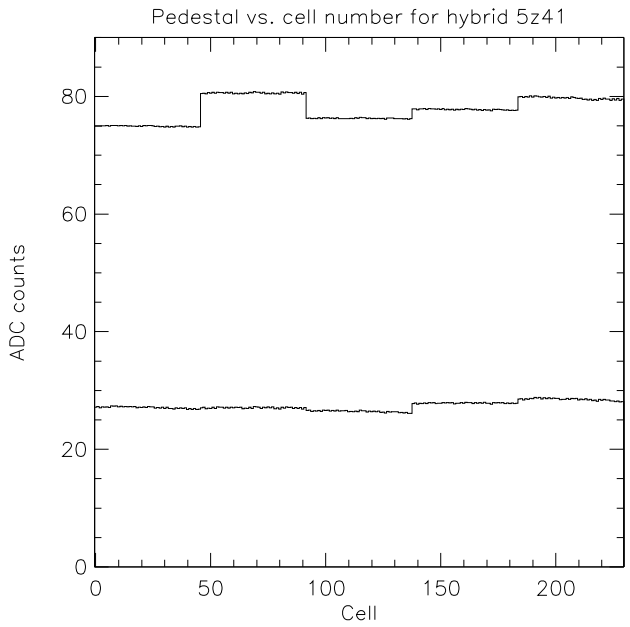
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

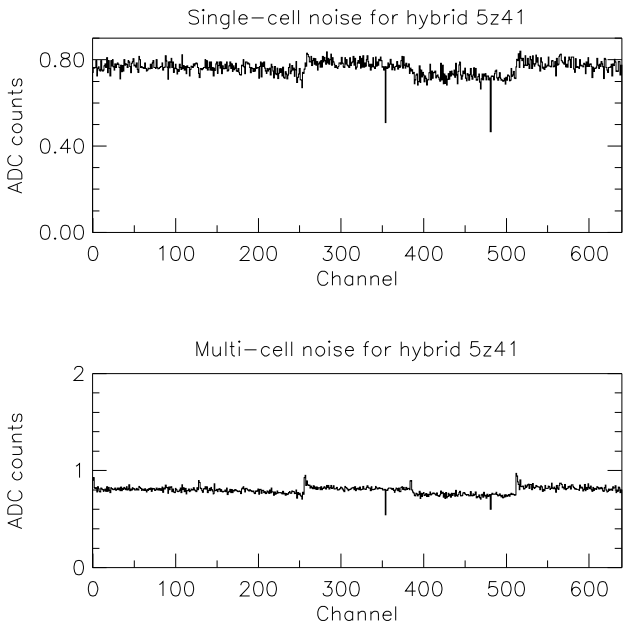
Pedestal vs. Pipeline Cell ID



6 Noise

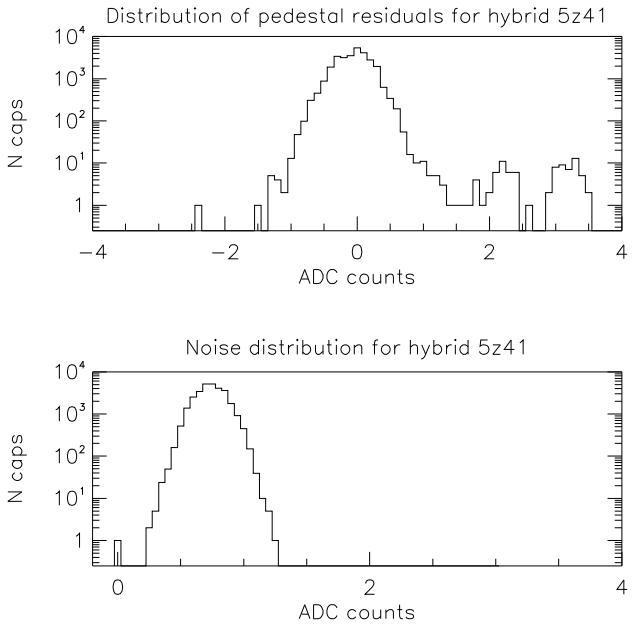
The following plots show the single-cell and multi-cell RMS noise:

RMS Noise

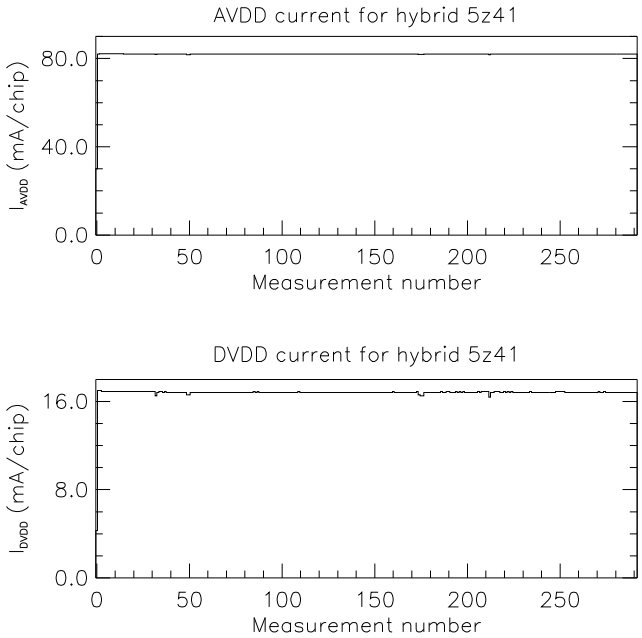


The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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