Hybrid 7p185 Traveler

June 2, 2000

1 Connectivity

Repairs on shorts:
$< 1\Omega$ HV- short to gnd.
Fixed by scratching HV- trace near cable, removing HV resistor from solder pad,soldering it directly to HV cap and adding a wire from cable solder field to HV resistor. In process of debugging/fixing, some unused solder pads were destroyed.

Fixes for opens:

2 Chips

The following chips were assembled on this hybrid (in the order that the chips get read out):
Hybrid 7P185 has die: 233-087 233-088 233-089 233-090 233-093 233-094 233-095

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 7p185 classification info. Created 13:18:06 05/29/00

Hybrid 7p185 quality: fair
Chip classification: good fair good good good fair good
Bad channels (chip-channel): 1-121 5-118
Bad cells: none
Random bad capacitors: none
Channels at pedestal needed for DCMS: 30.6 29.5 30.7 32.7 31.7 30.7 31.6
```

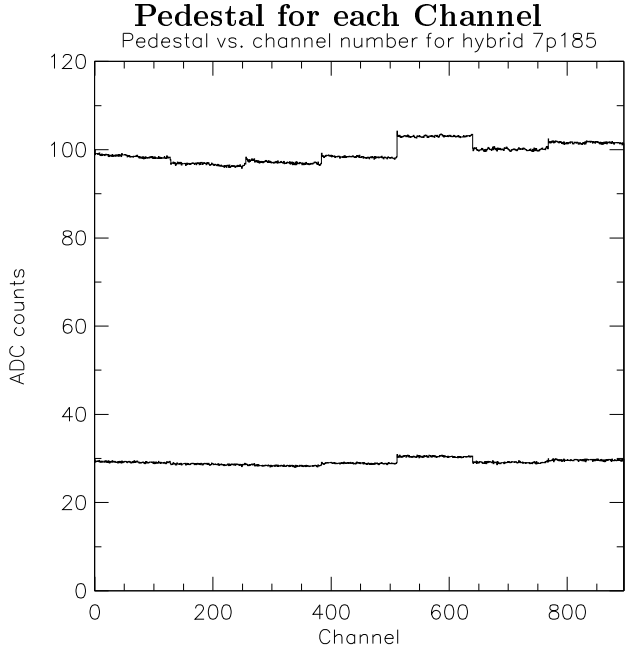
4 Comments

Encapsulated. FE DV finger gold bonds. HV tested.

5 Pedestal

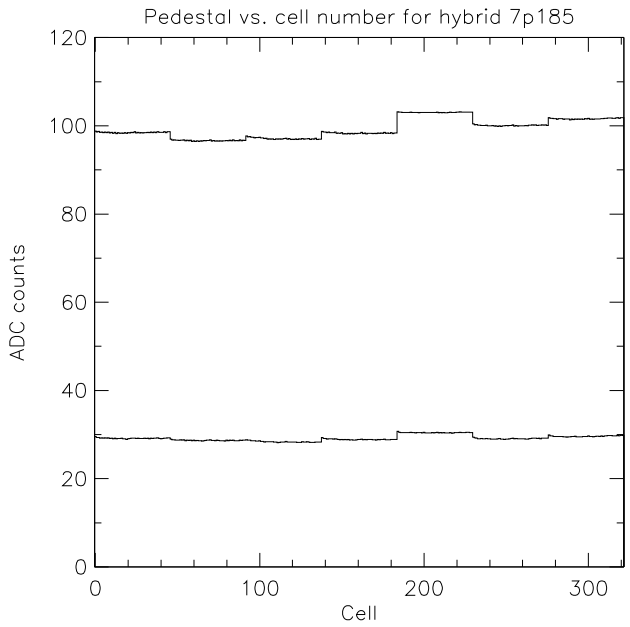
The following plot shows the pedestals vs. channel number with and without charge injection:

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.

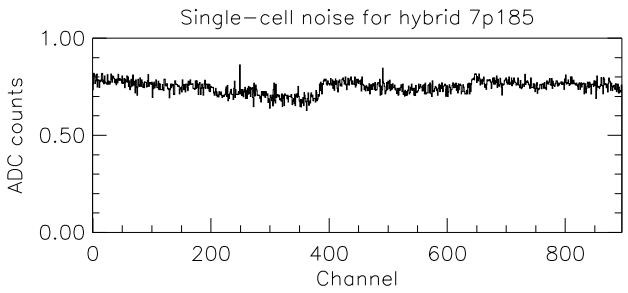
Pedestal vs. Pipeline Cell ID

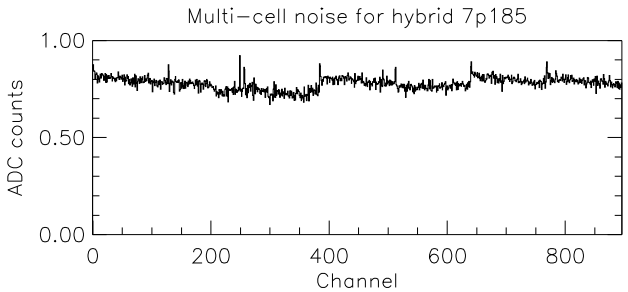


6 Noise

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

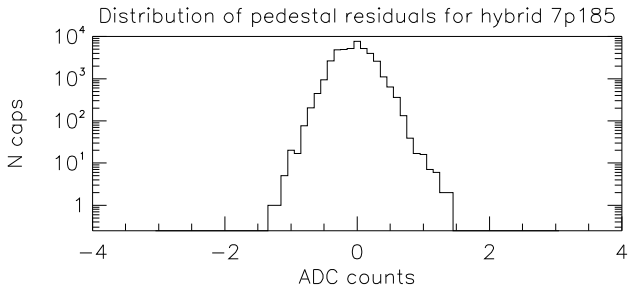
RMS Noise

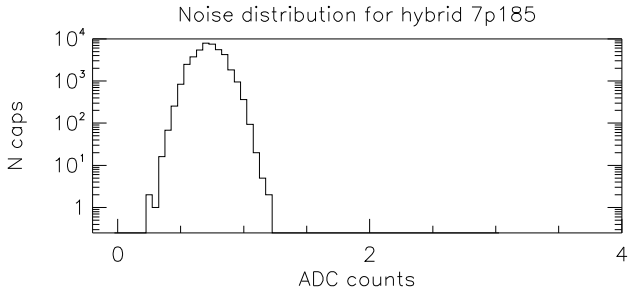




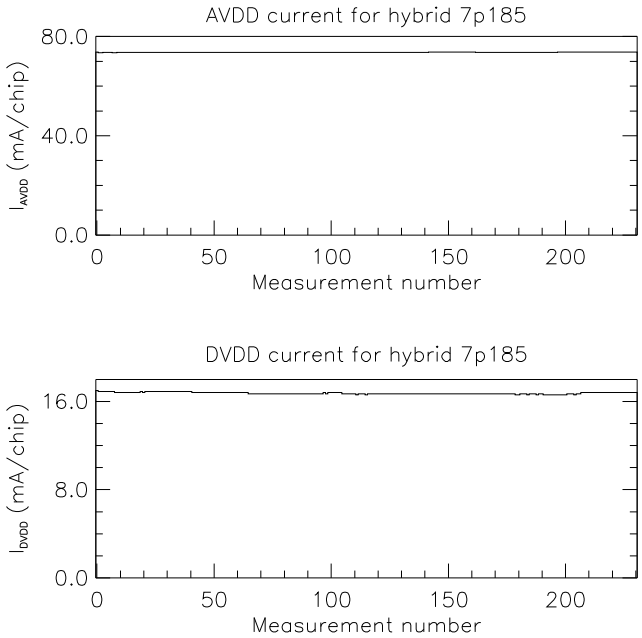
The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

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