# Hybrid 2z28 Traveler

January 13, 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 2Z28 has die: 079-012 079-013

## 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 2z28 classification info. Created 18:39:56 10/24/99

Hybrid 2z28 quality: fair
Chip classification: fair fair
Bad channels: none
Bad cells: none
Random bad capacitors (chip-cell-channel): 0-21-56 1-5-78
Channels at pedestal needed for DCMS: 31.6 33.6
```

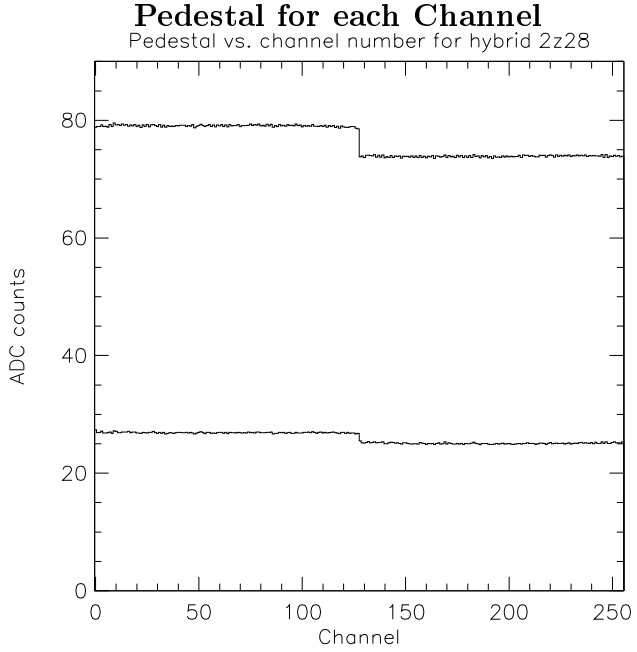
## 4 Comments

Retrofitted with 4.7$\mu$F digital caps and redundant FE DVDD, DGND bonds.
HV test.

# 5 Pedestal

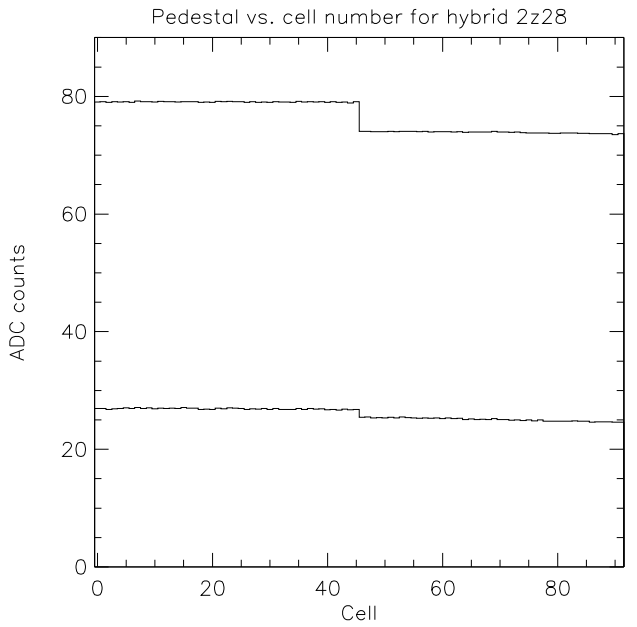
The following plot shows the pedestals vs. channel number with and without charge injection:

**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.

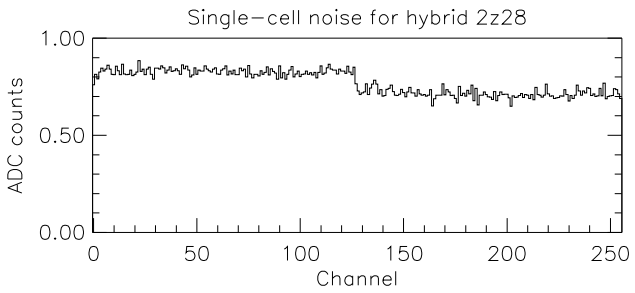
**Pedestal vs. Pipeline Cell ID**

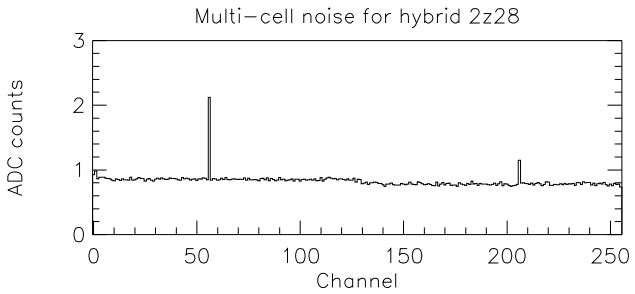


# 6 Noise

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

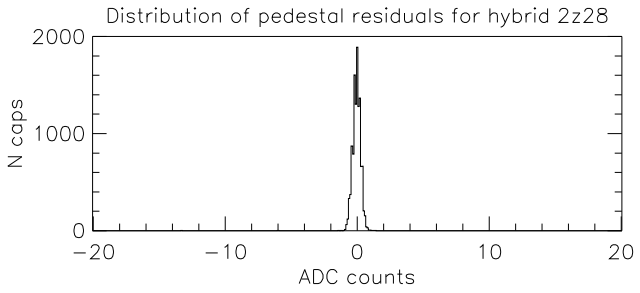
**RMS Noise**

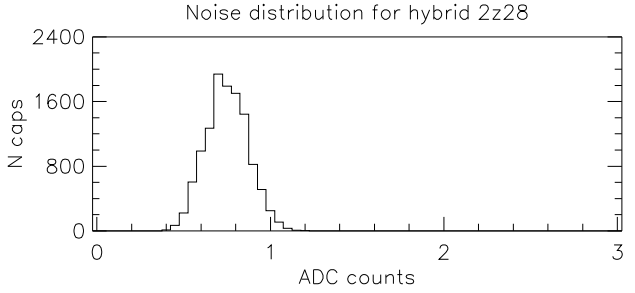


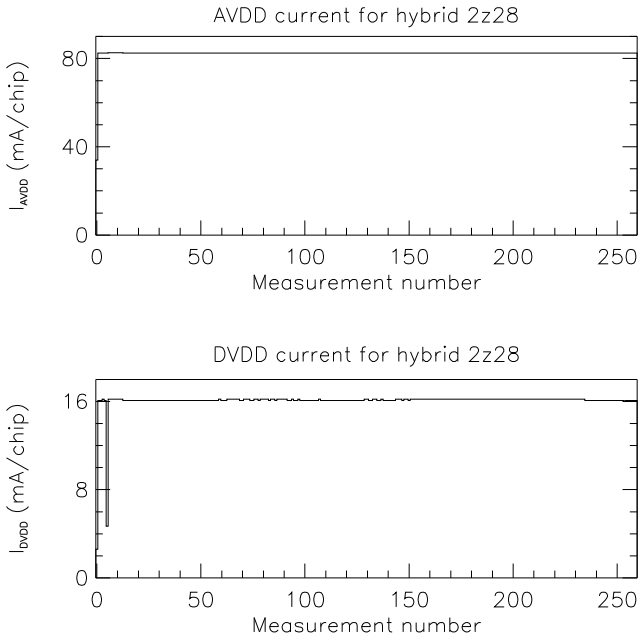

The following are histograms of the pedestal of each pipeline capacitor relative to the chip average (top); and the RMS noise of each capacitor (bottom):

**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**