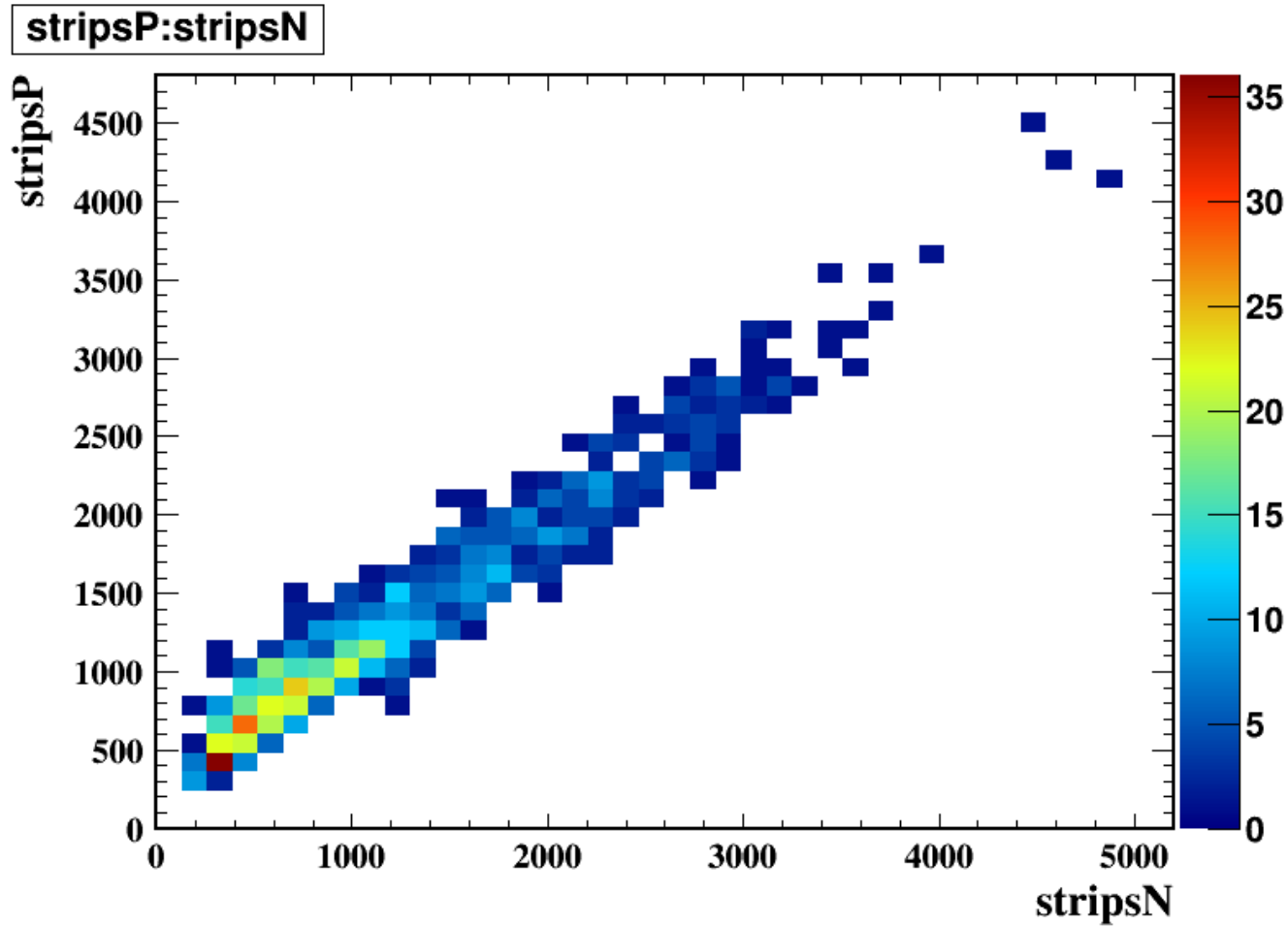


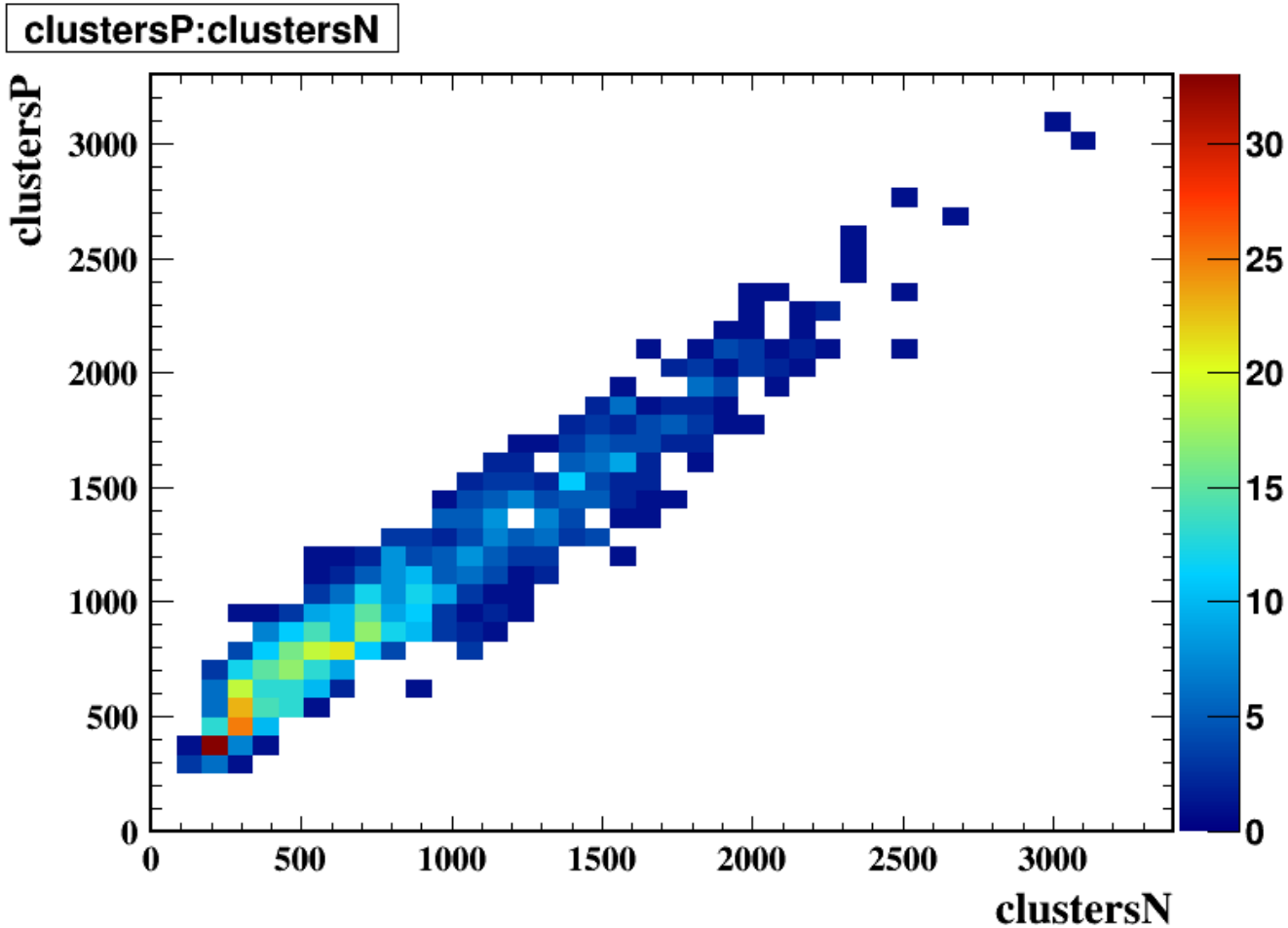
SSD Performance Summary

Long Zhou and Jim Thomas

N Side vs P Side fired strips

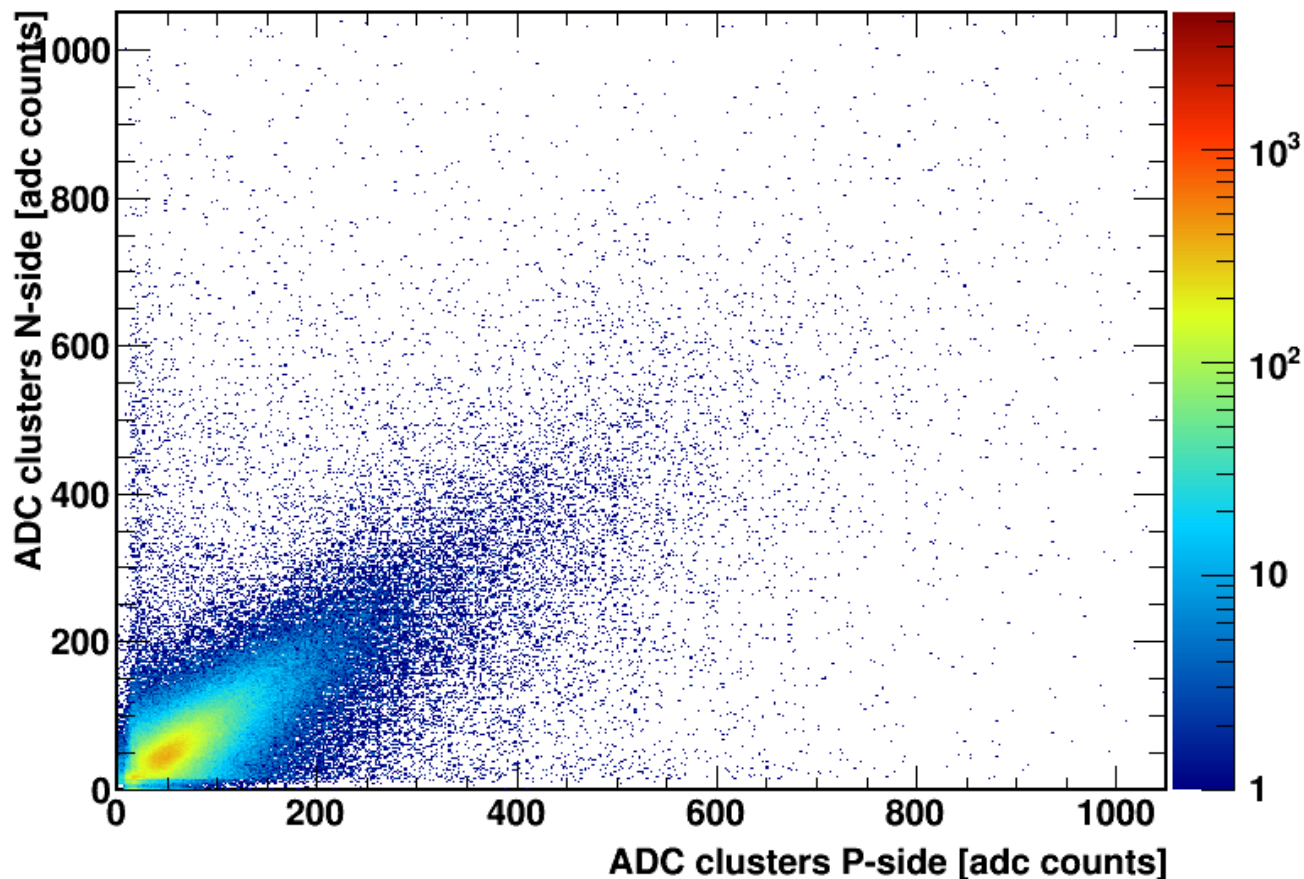


Reconstructed Clusters N side .vs. P side

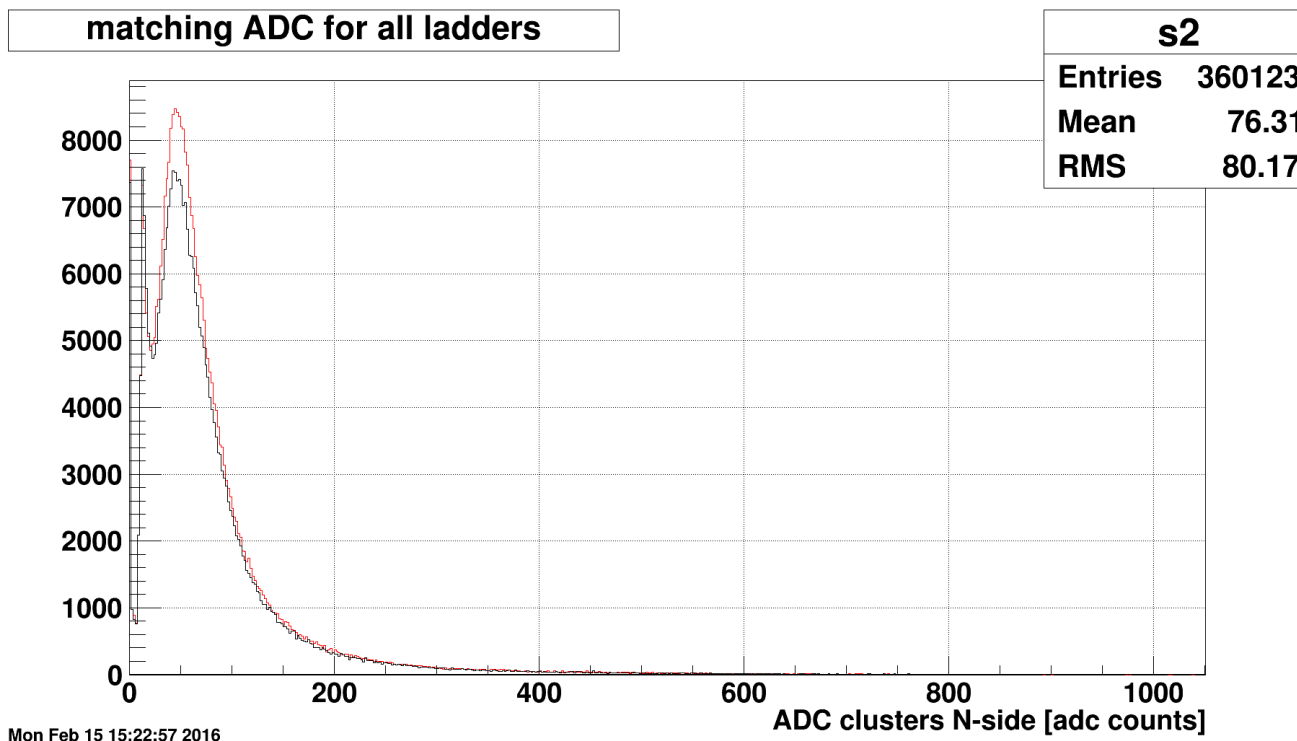


Matching for all ladders

matching ADC for all ladders

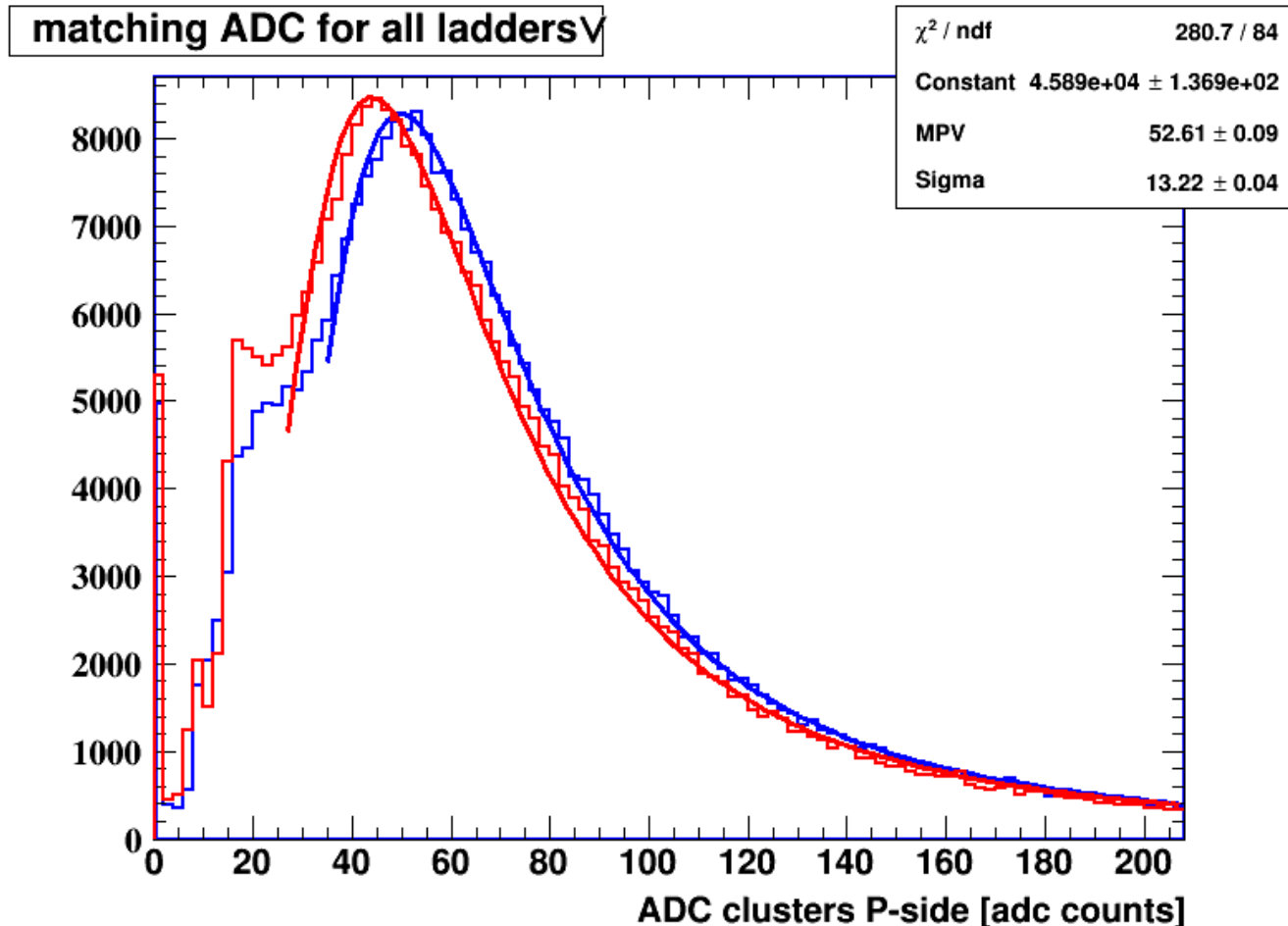


Changing the Internal Busy Setting



- Internal Busy = 4000 RHIC Tics (~425 microseconds)
- Internal Busy = 3000 RHIC Tics (~320 microseconds)
- Note exponential noise curve attached to Landau Curve
- Signal to Noise is better at 4000, but 3000 is still very good

Landau Curve Fits: P side and N side



- Landau function fits data nicely, now with tighter cut on the noise
- Threshold = $N \cdot \text{Sigma} + \text{Constant}$, $N = 3$ Constant = 4 ADC counts

Backup slides

Common Mode Algorithm to find A128 <avg>



binary

- Select 2 channels using $\text{mean} = 0$ and $\text{cut} \pm 280$ counts
 - Accept first 2 channels that are within 0 ± 280 , calculate mean
- Select 4 channels using $\text{mean} = \text{mean}(2c)$ and $\text{cut} \pm 140$ counts
 - Accept next 4 channels that are within $\text{mean}(2c) \pm 140$, calculate new mean
- Select 8 channels using $\text{mean} = \text{mean}(4c)$ and $\text{cut} \pm 70$ counts
 - Accept next 8 channels that are within $\text{mean}(4c) \pm 70$, calculate new mean

linear

- Select 16 channels using $\text{mean} = \text{mean}(8c)$ and $\text{cut} \pm 35$ counts
 - Accept next 16 channels, calculate mean, etc. but now keep data in sum
- Select 16 more channels using $\text{mean} = \text{mean}(16c)$ and $\text{cut} \pm 25$ counts
 - Accept next 16 channels, calculate mean, etc. but now keep data in sum
- Select 32 more channels using $\text{mean} = \text{mean}(32c)$ and $\text{cut} \pm 15$ counts
 - Accept next 32 channels, calculate mean, etc., using most recent $32+16+16 = 64$ channels to calculate the final mean value
- 78 channels required (80 if we skip first and last channels)
 - if 78 (80) good channels cannot be found then mark A128 as bad