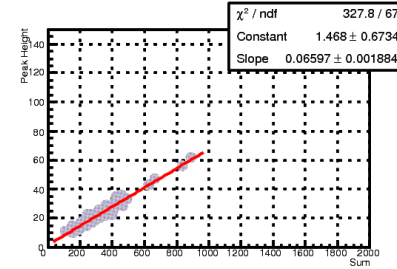
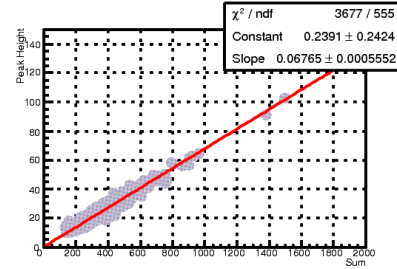
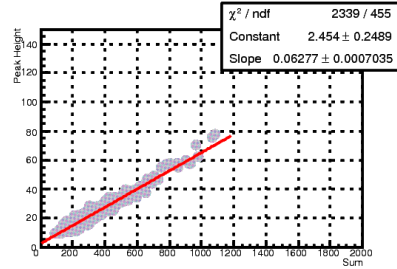
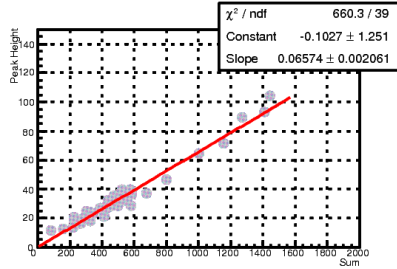


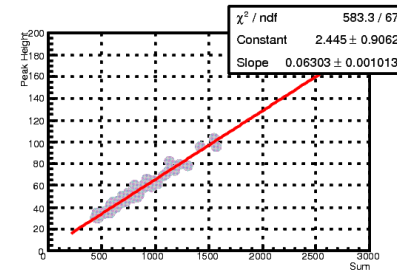
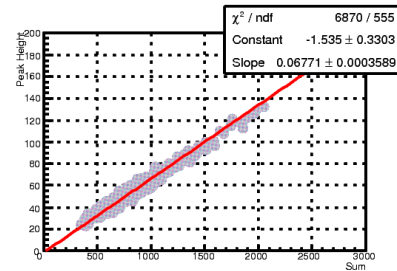
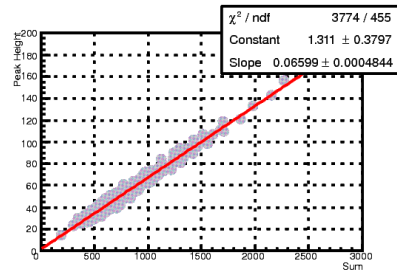
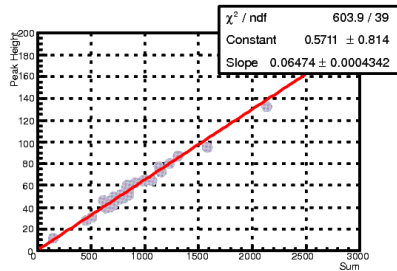
# MIPs calibration

Shaun Krueger  
UofR Group  
Updated: Oct 22, 2013

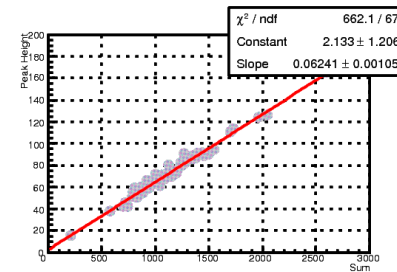
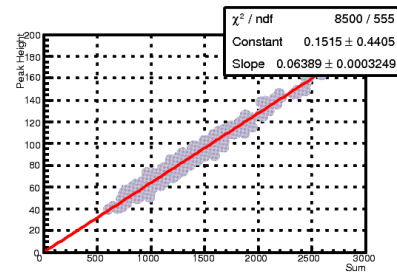
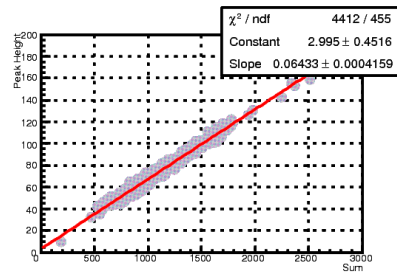
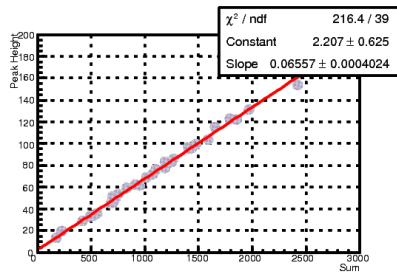
# Peak vs Sum Plot (2404 Upstream)



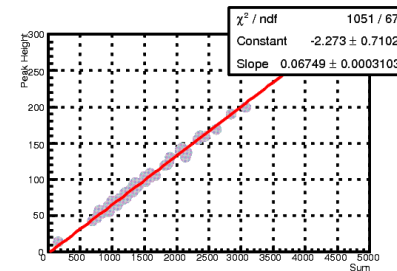
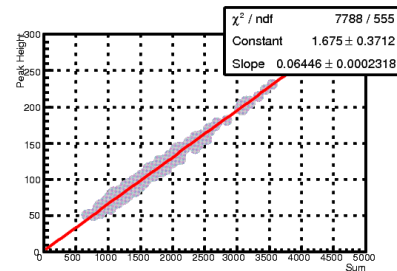
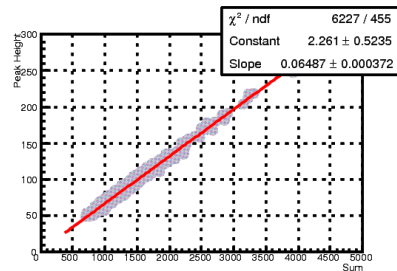
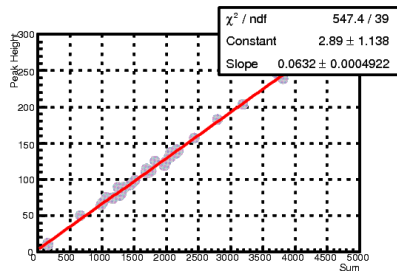
X: 120  
Y: 2000



X: 200  
Y: 3000

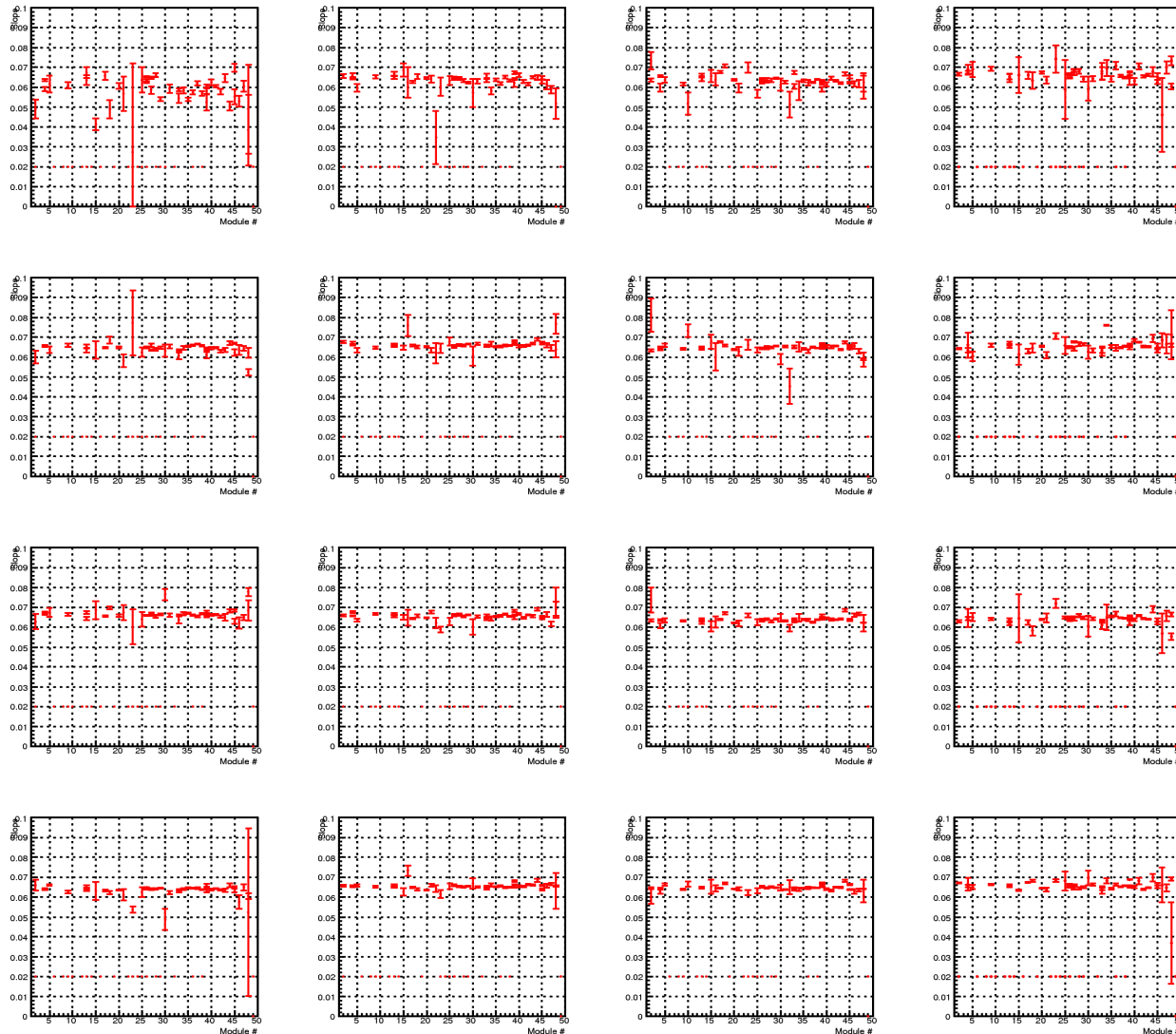


X: 200  
Y: 3000



X: 300  
Y: 5000

# Slope scatter plot



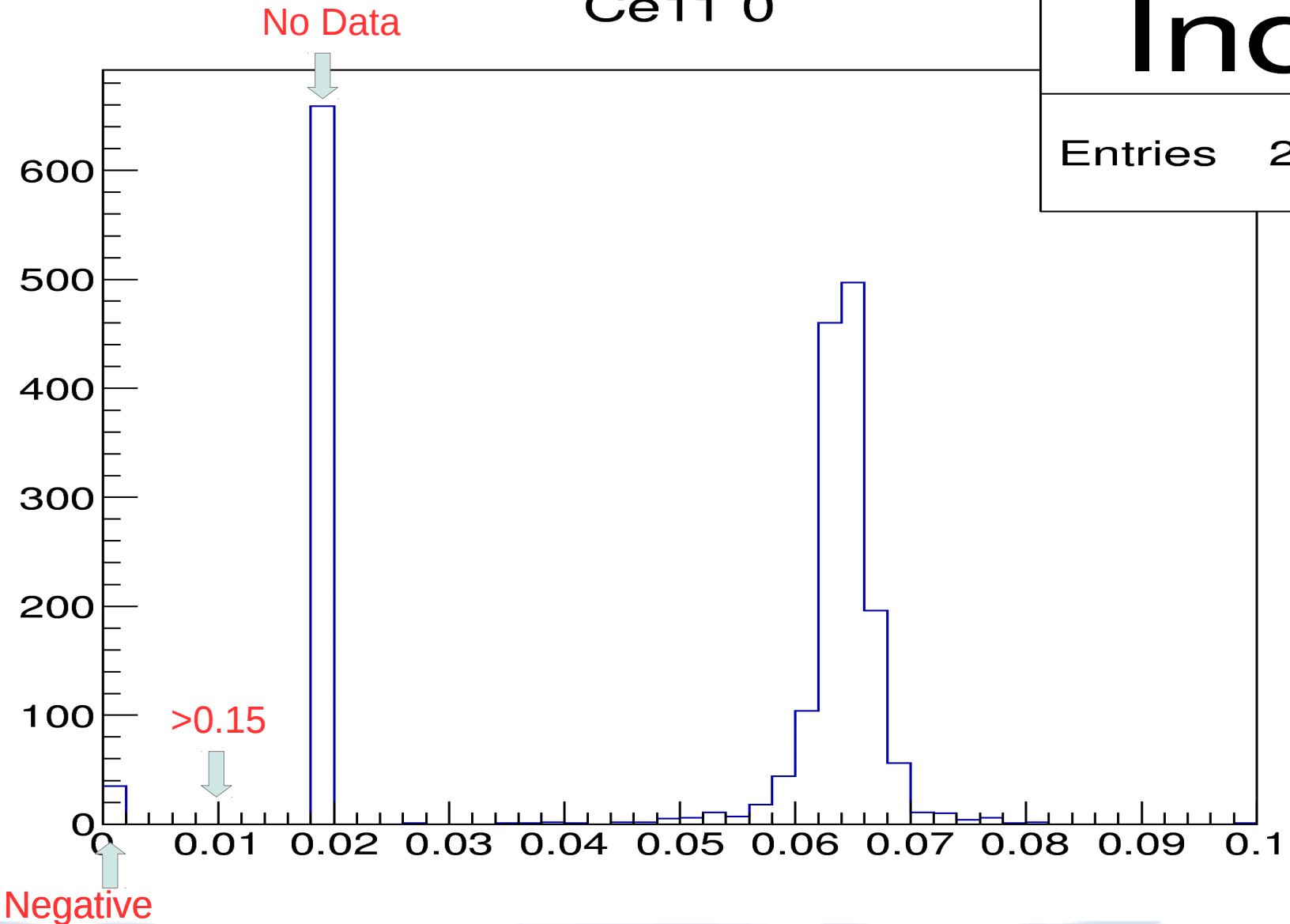
- Slope centered on 0.065
- Slope set to 0 if negative
- Slope set to 0.01 if greater than 0.15
- Slope set to 0.02 if no data is present

# Slope Histogram

Ce11 0

Ind

Entries 2144



# Calculations

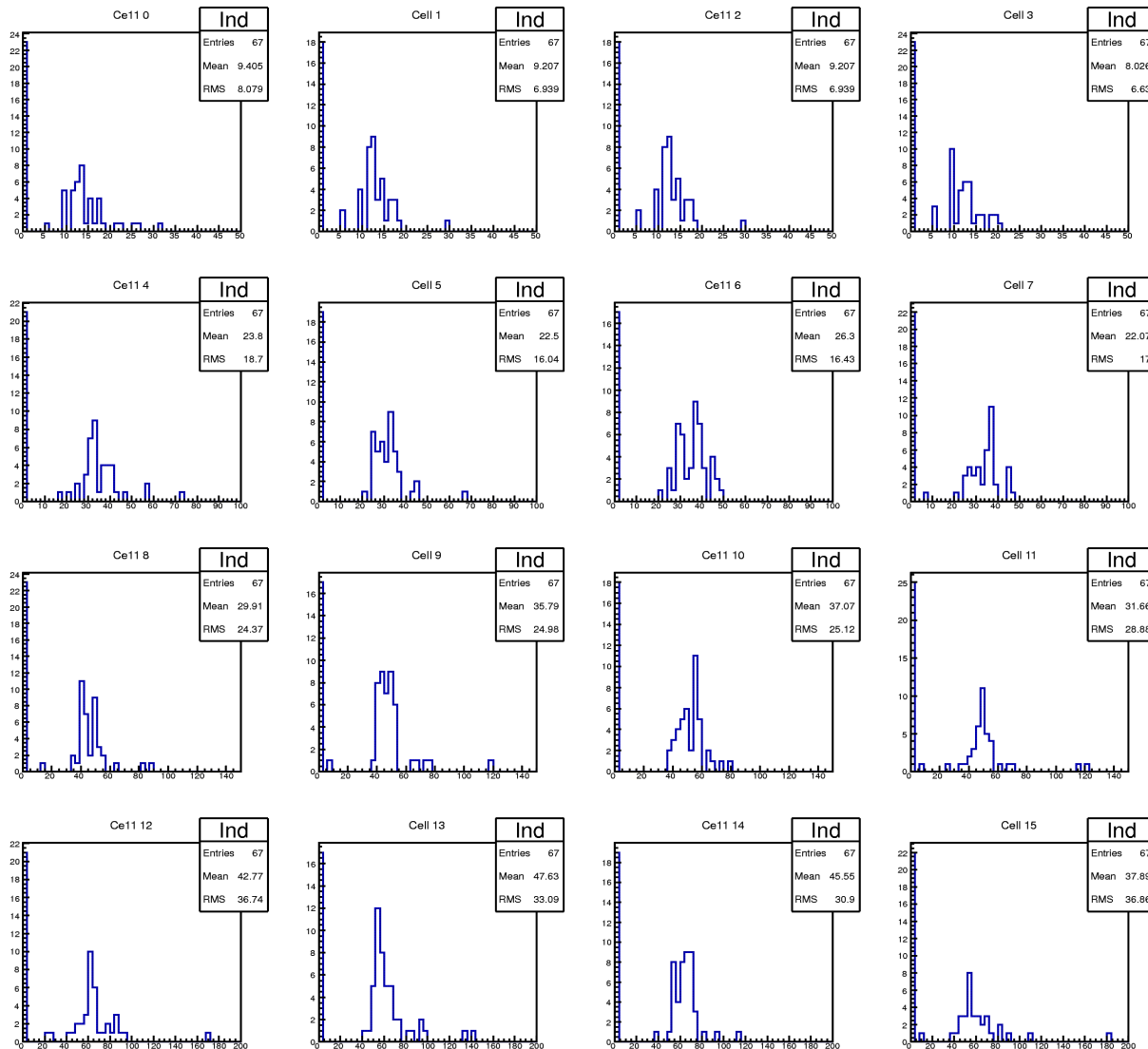
- Using  $0.5$  (fiber fraction)  $\times$  size  $\times 2$  MeV/cm /  $0.09$

Row	Expected Energy (MeV)
1	17.17
2	34.34
3	51.50
4	82.00

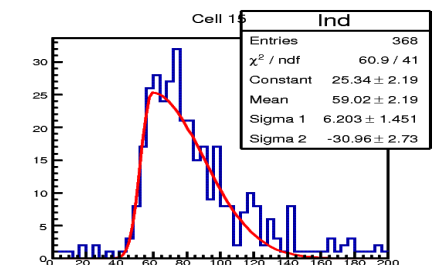
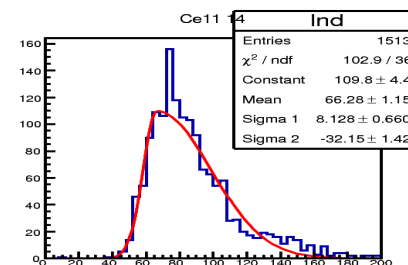
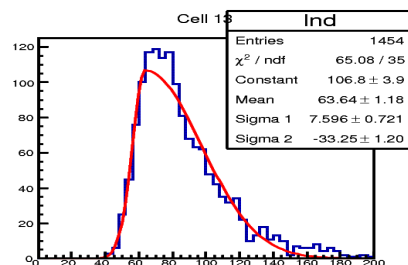
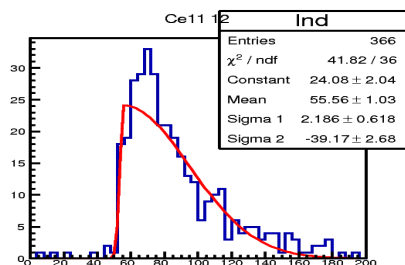
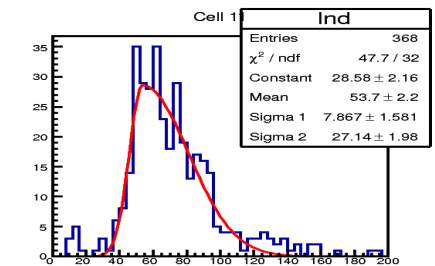
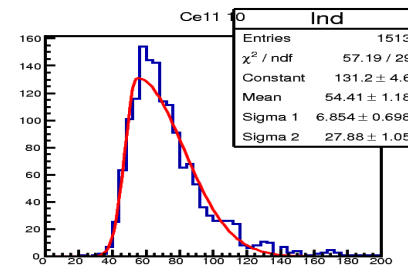
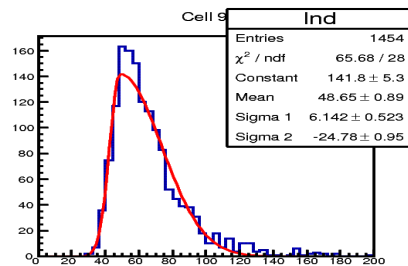
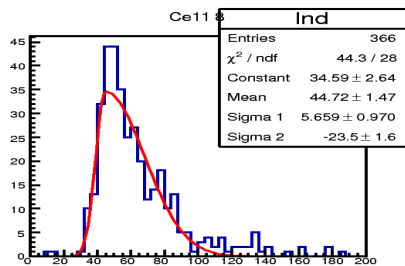
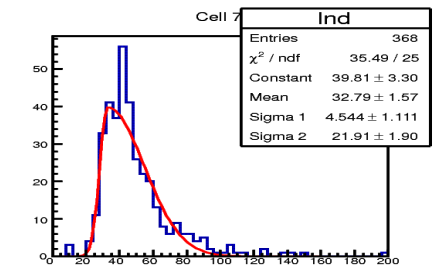
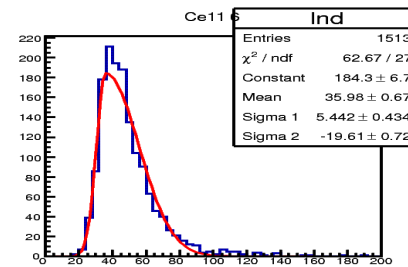
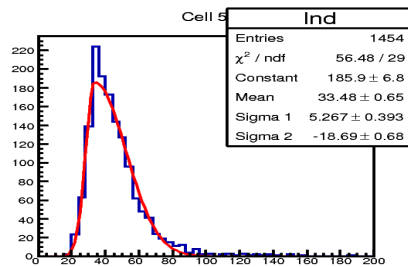
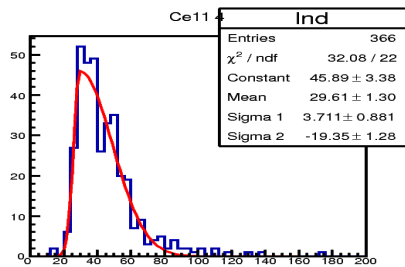
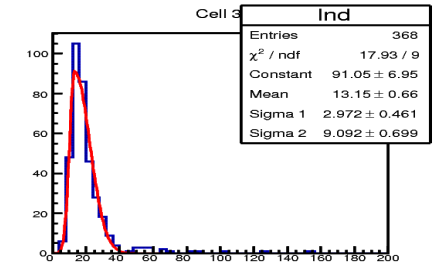
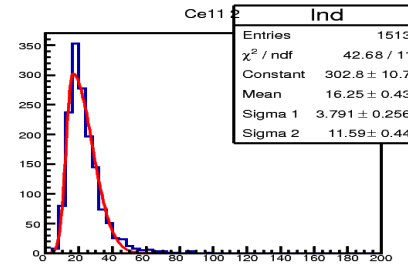
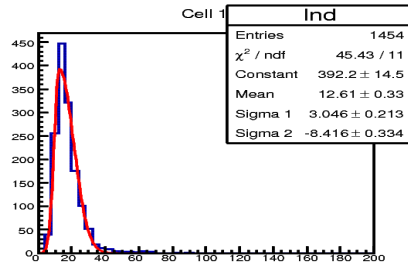
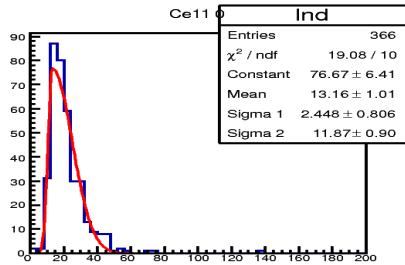
- Using  $1$  MeV/Peak height and  $0.065$  Peak height/sum find a conversion of  $0.065$  MeV/sum

# Energy - Upstream

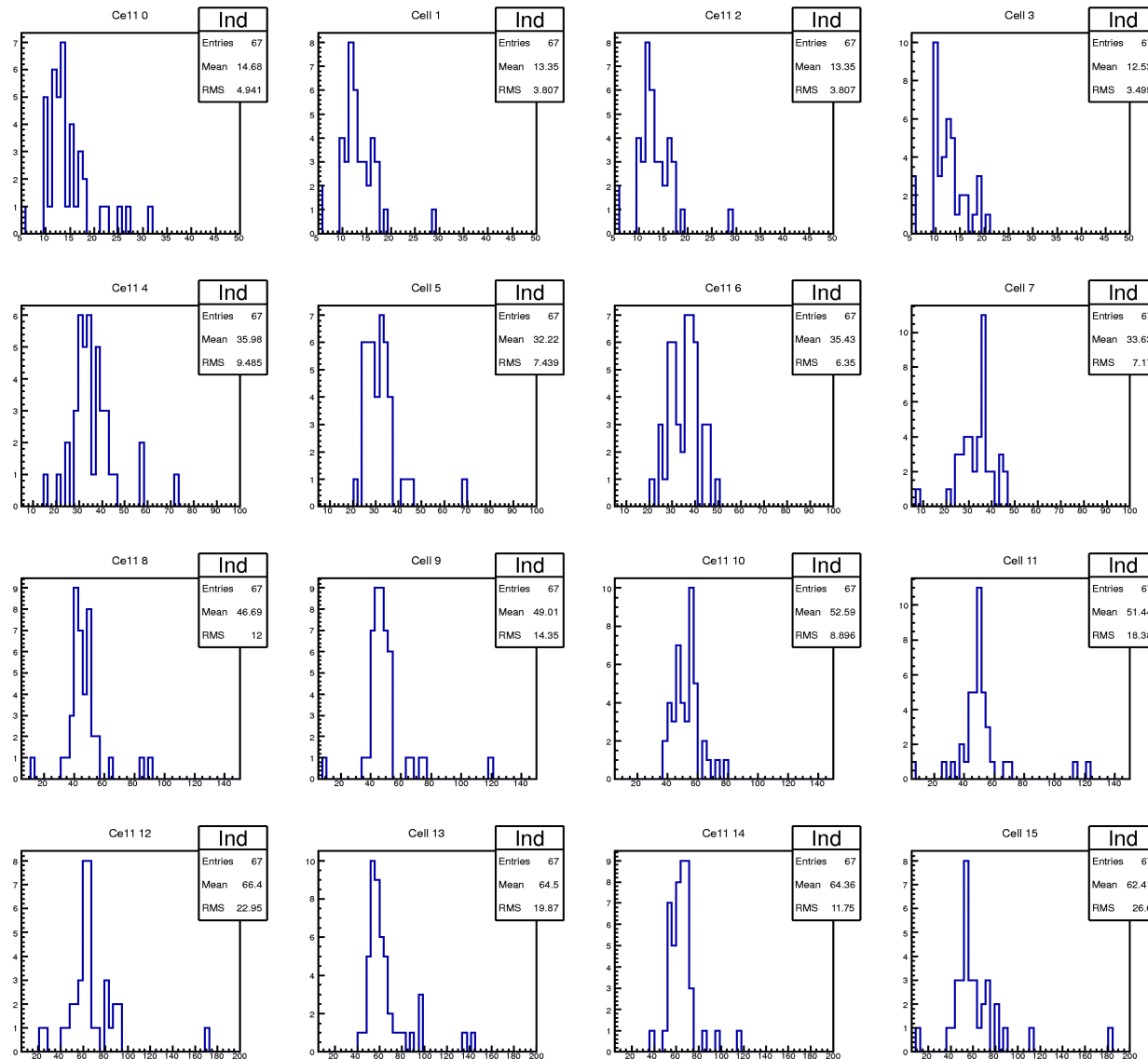
- Row 1: 9 MeV
- Row 2: 23 MeV
- Row 3: 35 MeV
- Row 4: 47 MeV



# Sample Distribution – Mod 27



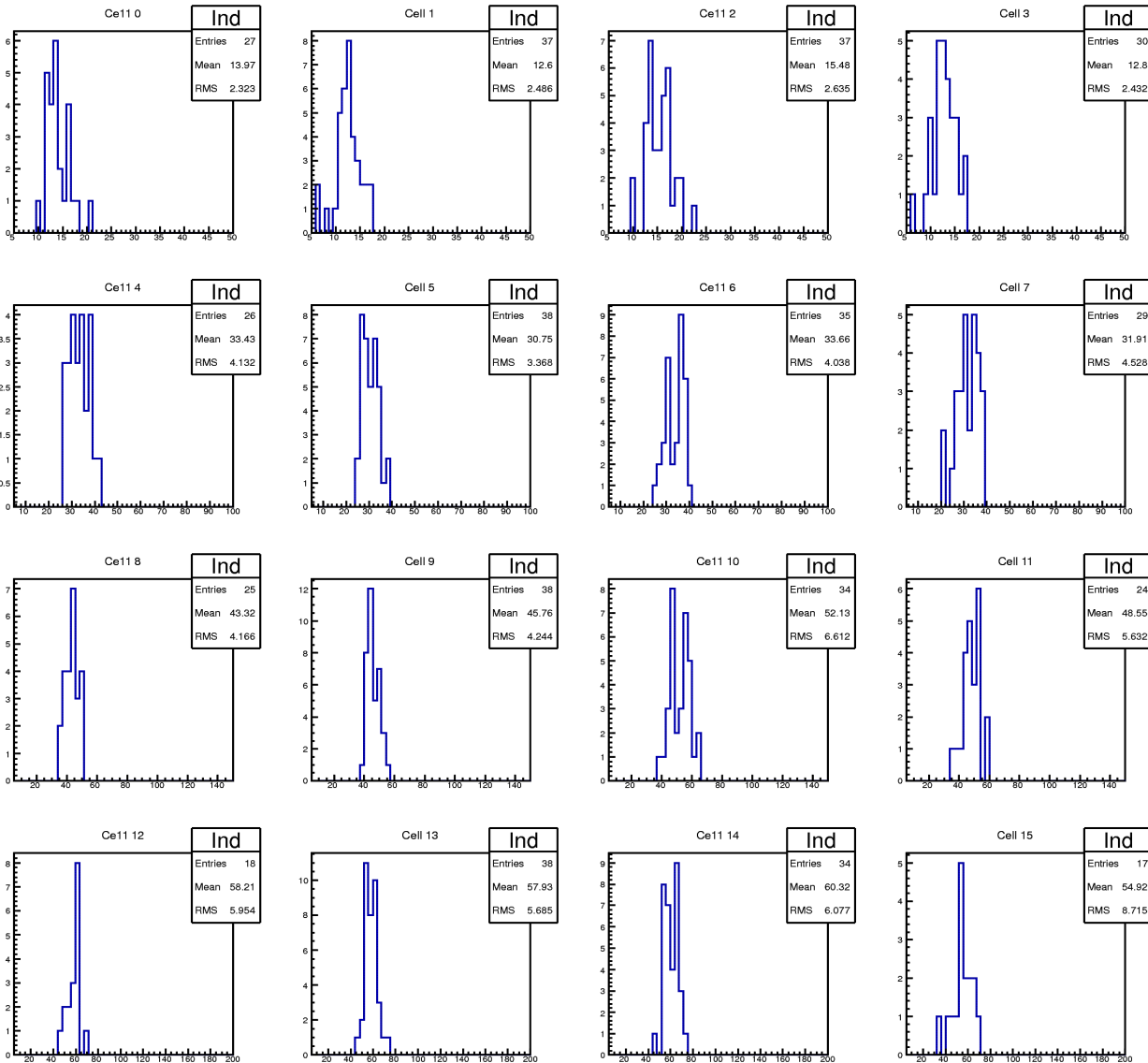
# Energy – Upstream ( 0 removed)



- Row 1: 14 MeV
- Row 2: 35 MeV
- Row 3: 49 MeV
- Row 4: 65 MeV
- Row 4 may be lower due to larger light guides



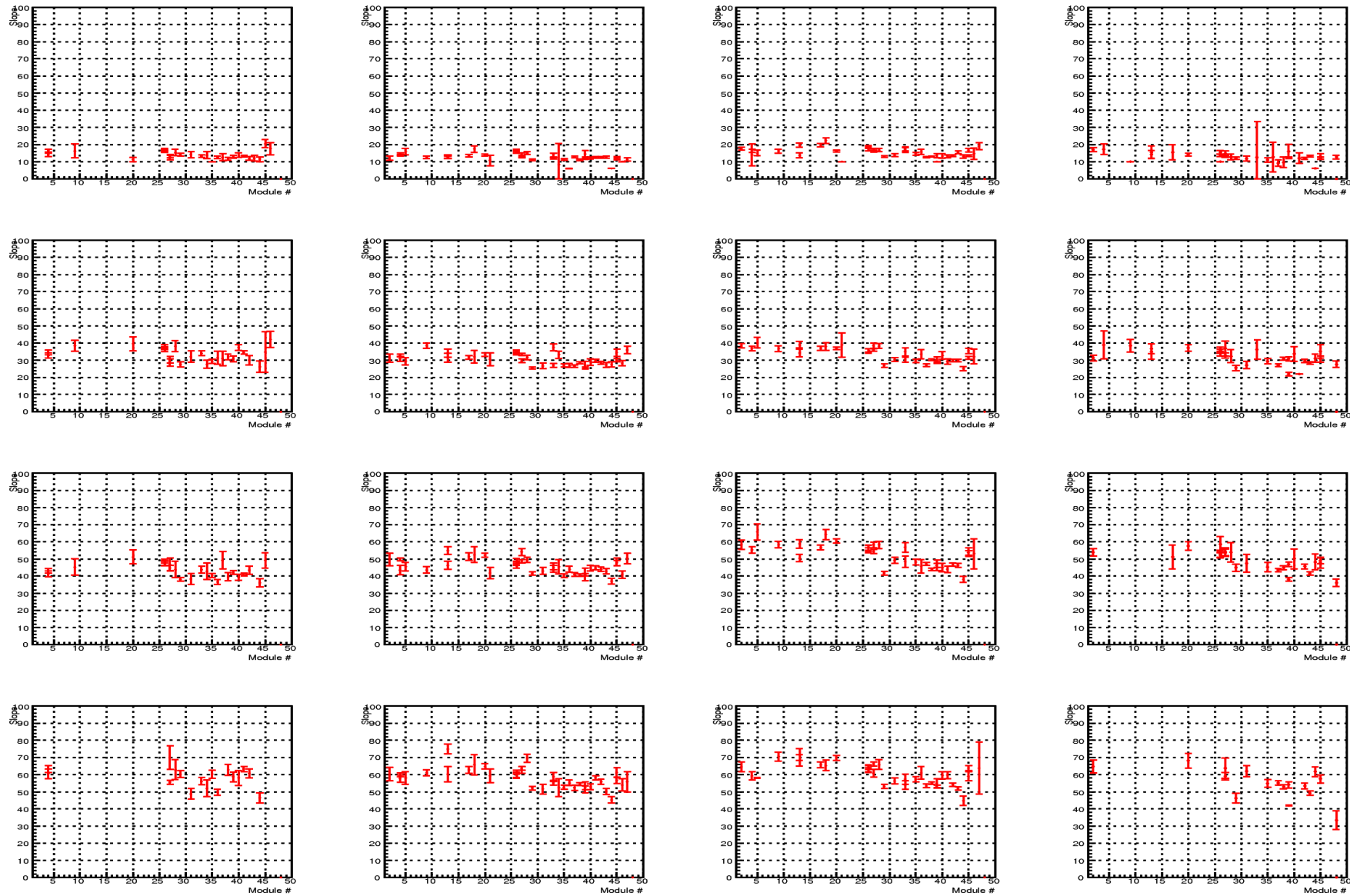
# Energy – Cleaned Up (Upstream)



- Removed all modules with >50 good events
- Removed bad fits

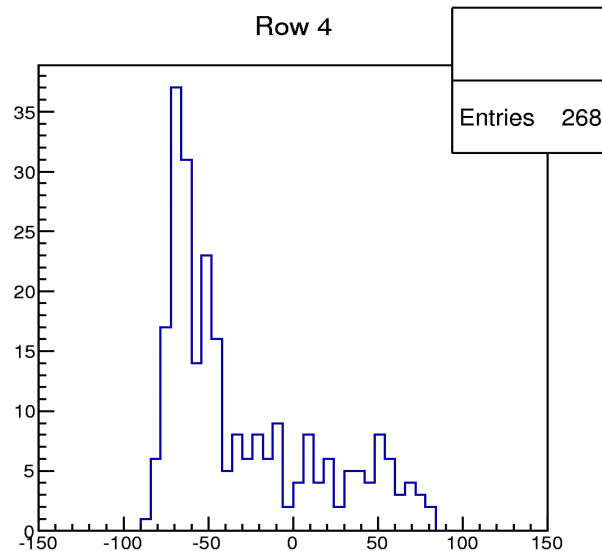
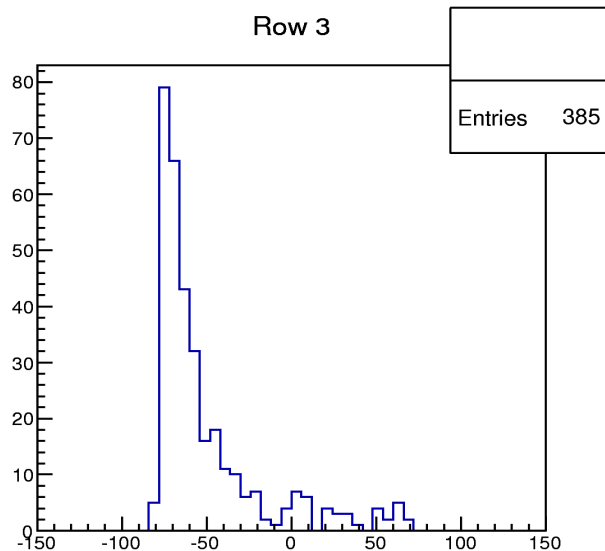
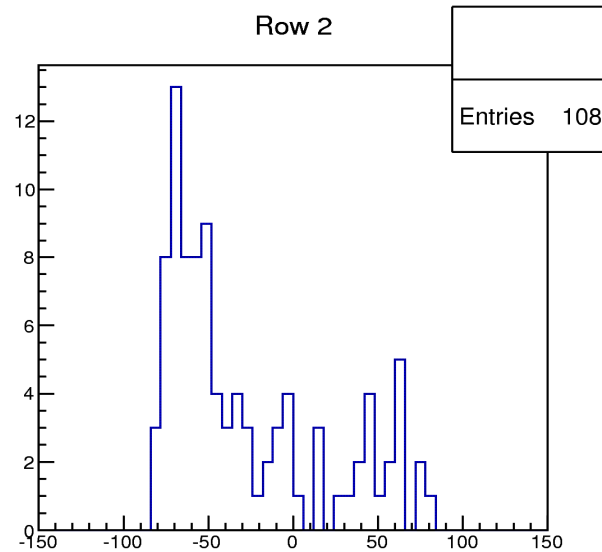
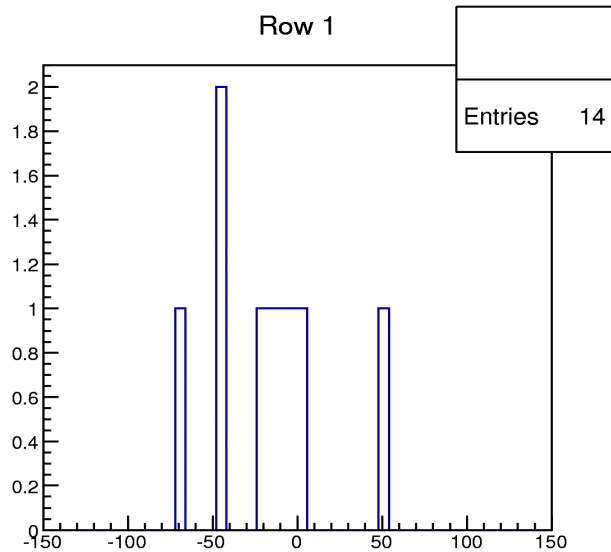
Row	Expect	Actual (Col 2)
1	17.2	12.6
2	34.3	30.8
3	51.5	45.8
4	82.0	57.9

# Energy Vs Mod Number - Upstream





# TDC Data



Using available  
TDC information  
for cosmic events  
to determine angle

Used:

$(\text{TDC}_{\text{cup}} - \text{TDC}_{\text{down}}) / 2$

↑  
Offset