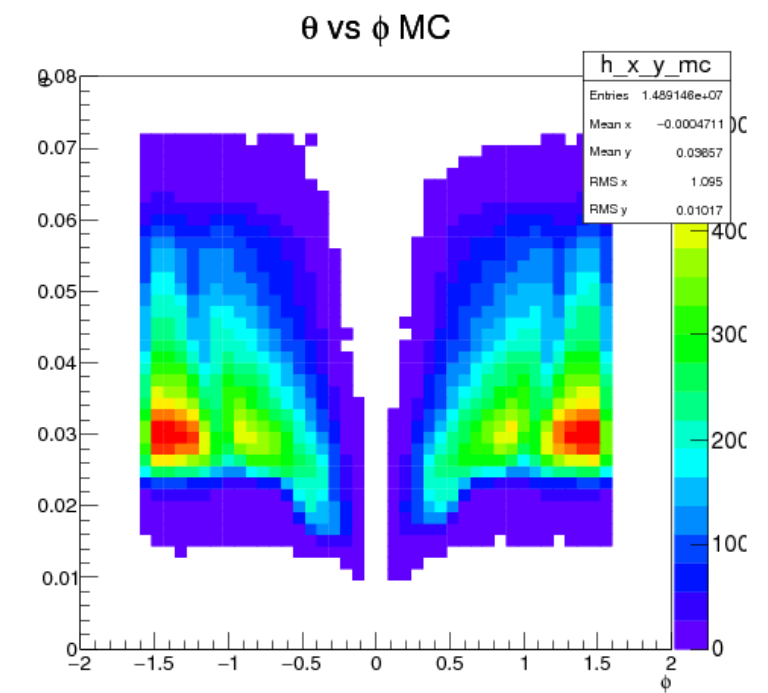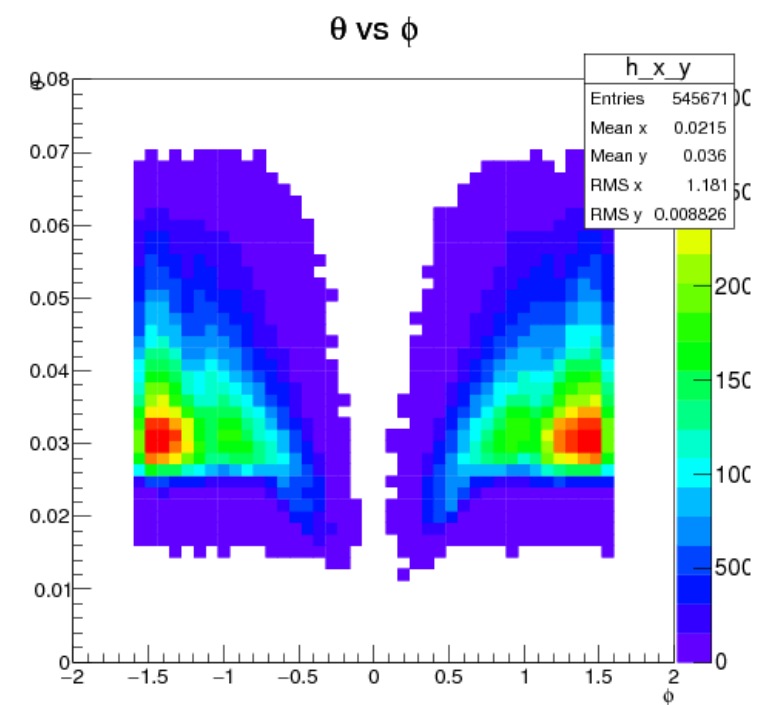- Pass 1, V1 Detector, Singles1 trigger

- FEE cuts – 10 ns timing window, 0.6-1.2 GeV energy cut, >2 cluster size cut

- Looking at FEE rates in different regions of detector – namely spherical coordinates theta and phi

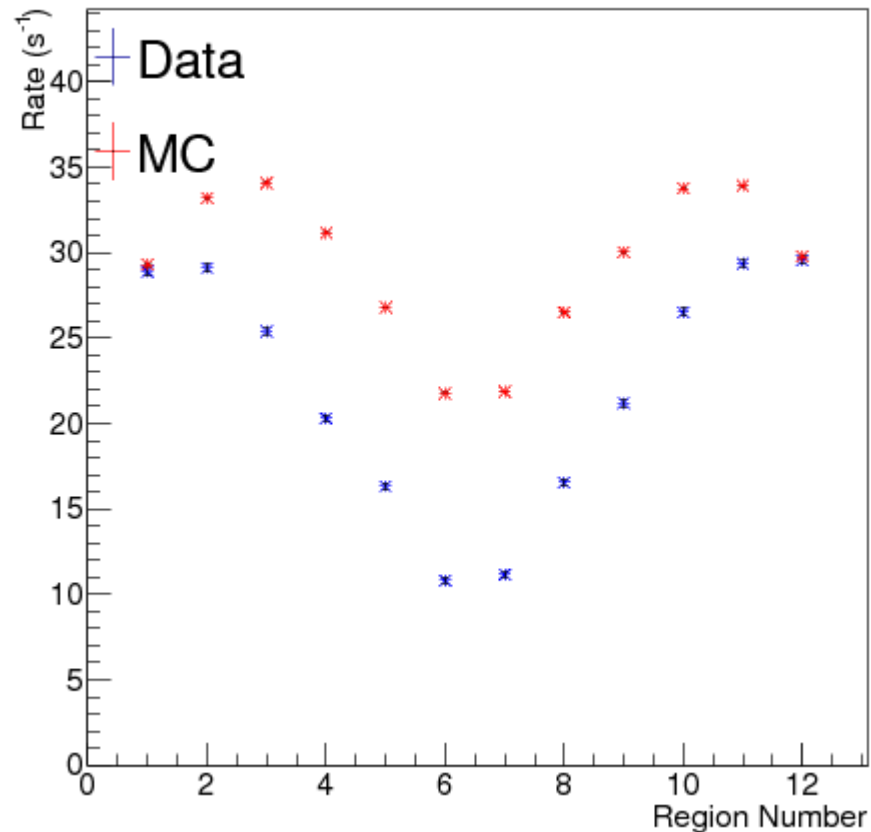- Comparison of data, MC, and calculation

Region Definitions

Region #	φ Regions				θ Regions			
	φmin	φmax	θmin	θmax	φmin*	φmax*	θmin	θmax
1	-1.1	-1	0.024	0.044	0.5	1.1	0.024	0.0265
2	-1	-0.9	0.024	0.044	0.5	1.1	0.0265	0.029
3	-0.9	-0.8	0.024	0.044	0.5	1.1	0.029	0.0315
4	-0.8	-0.7	0.024	0.044	0.5	1.1	0.0315	0.034
5	-0.7	-0.6	0.024	0.044	0.5	1.1	0.034	0.0365
6	-0.6	-0.5	0.024	0.044	0.5	1.1	0.0365	0.039
7	0.5	0.6	0.024	0.044	0.5	1.1	0.039	0.0415
8	0.6	0.7	0.024	0.044	0.5	1.1	0.0415	0.044
9	0.7	0.8	0.024	0.044	0.5	1.1	0.044	0.0465
10	0.8	0.9	0.024	0.044	0.5	1.1	0.0465	0.049
11	0.9	1	0.024	0.044	0.5	1.1	0.049	0.0515
12	1	1.1	0.024	0.044	0.5	1.1	0.0515	0.054

*phi angles include both top and bottom regions

θ vs φ

h_x_y
Entries 545671
Mean x 0.0215
Mean y 0.036
RMS x 1.181
RMS y 0.008826

θ vs φ MC

h_x_y_mc
Entries 1.489148e+07
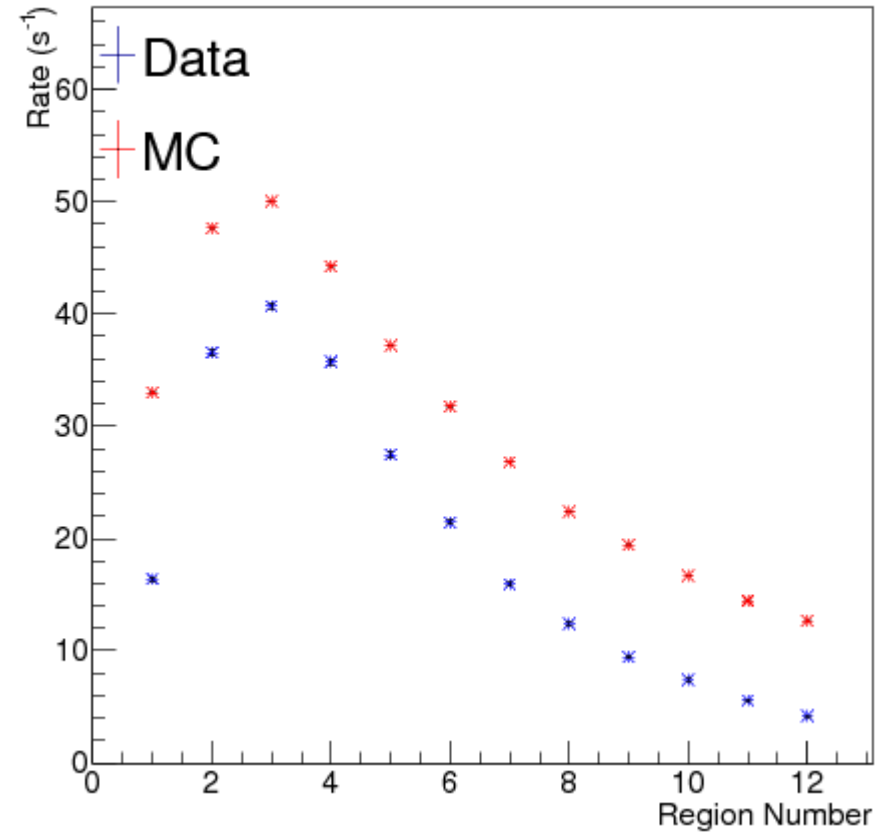Mean x −0.0004711
Mean y 0.03857
RMS x 1.095
RMS y 0.01017

- Matching shapes, possible normalization problem
- Data normalized based on time, current, blind, and deadtime
- MC normalized based on time, current, and pre-scale
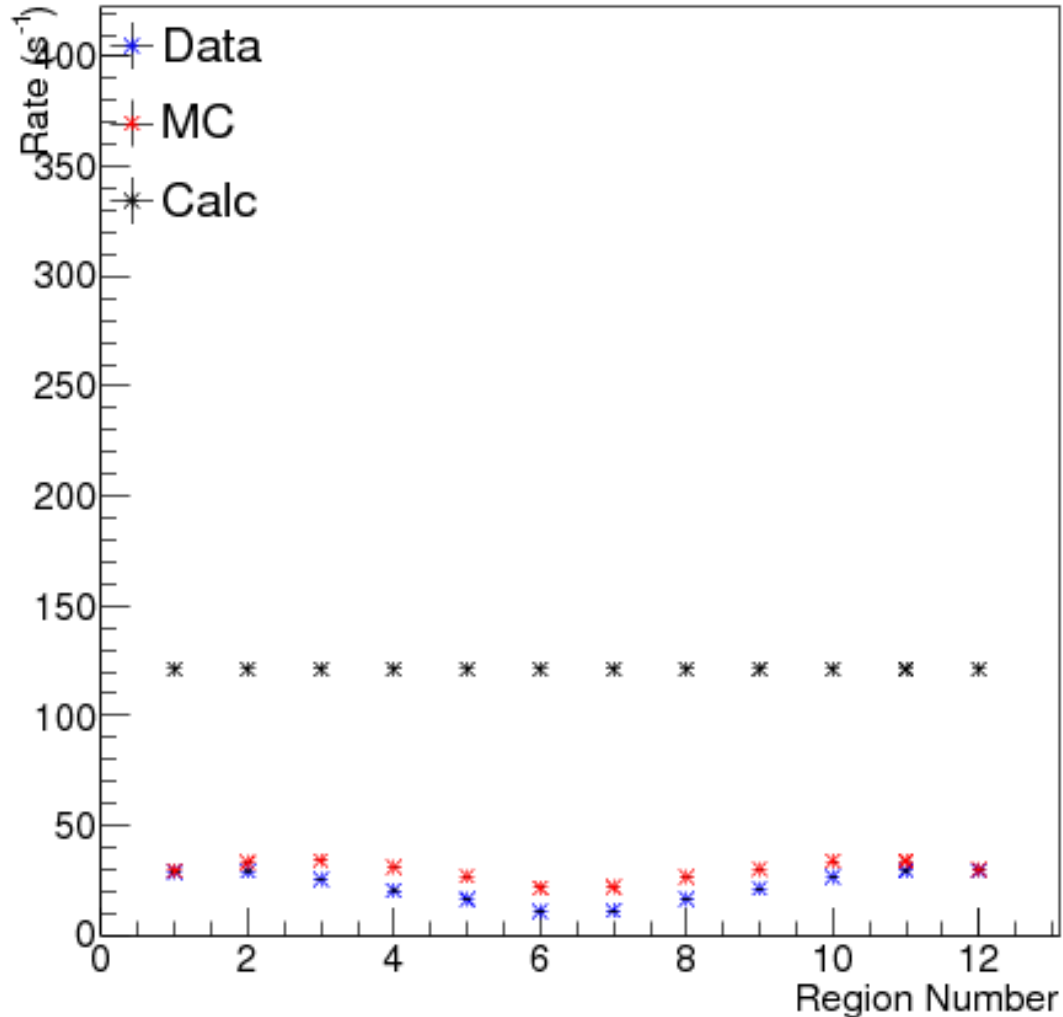

FEE Rate Phi

FEE Rate Theta

- Mott scattering – electric form factor NOT included yet
- Calculation are a factor of ~5 too large

FEE Rate φ

FEE Rate θ