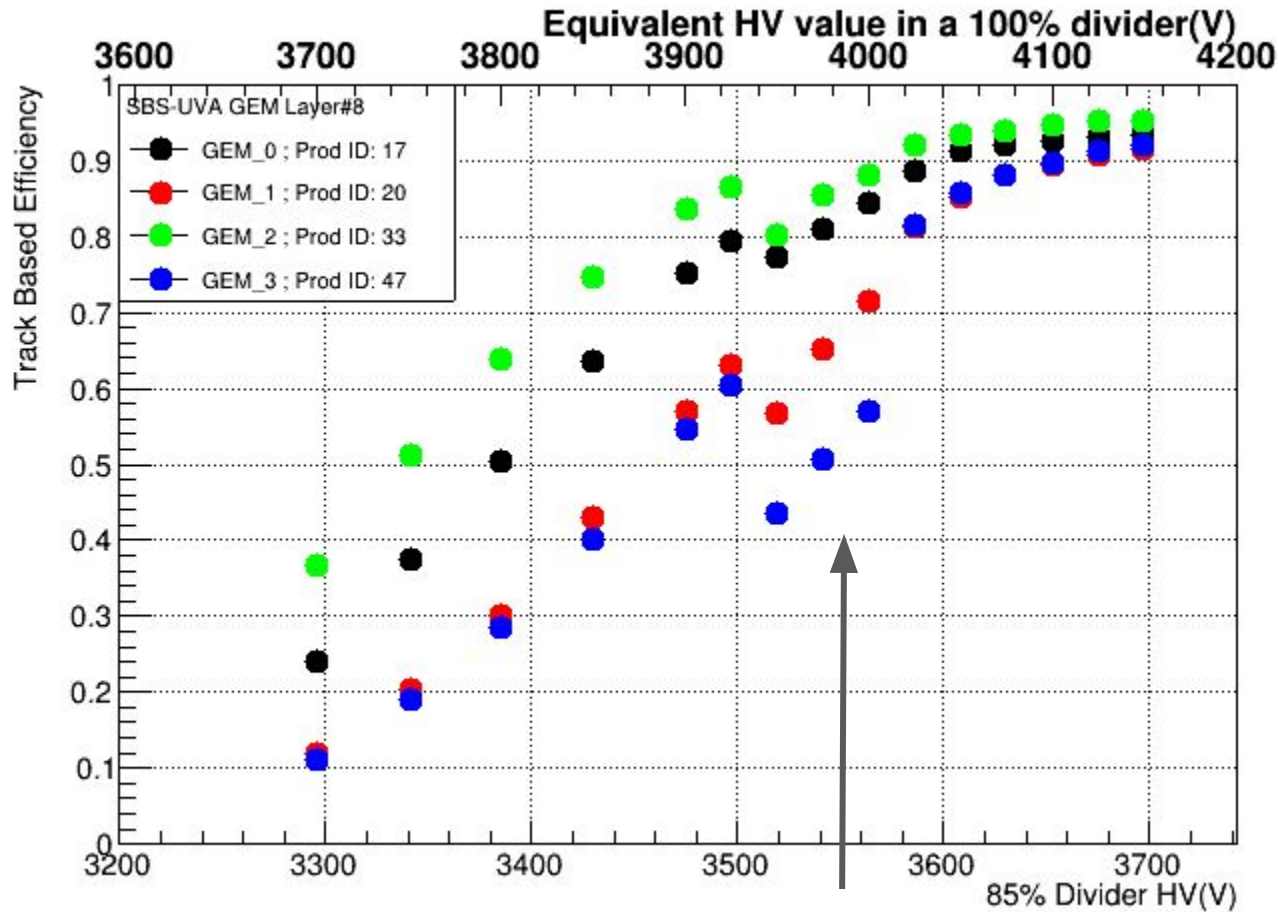


UVA SBS Layer #8 HV Scan Results

- All four modules have the 85% divider modification
- In the following plots, the bottom x - axis refers to the actual applied voltage on the divider and the top x-axis refers to the equivalent HV which would be the same HV applied on a 100% divider to get the same current through the divider
- Scan was carried out from 3296 V (3700 V equivalent) to 3697 V (4150 V equivalent)
- GEM_0 and GEM_2 have reached the efficiency plateau and are above 90% efficient by 3653 V (4100 V equivalent)
- GEM_1 and GEM_3 are also about 90% efficient by 3653 V, even though they have not plateaued nicely by then

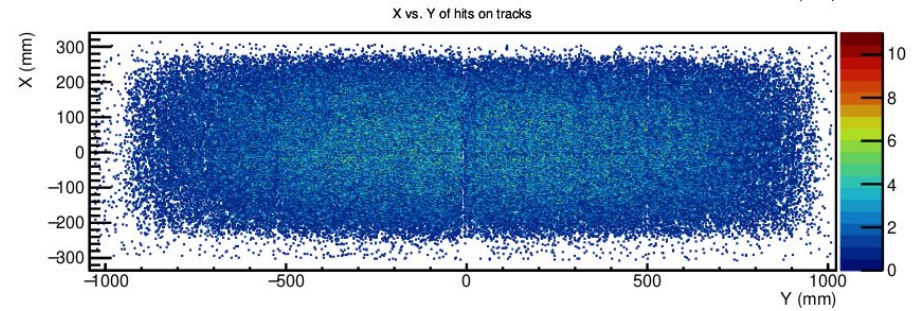
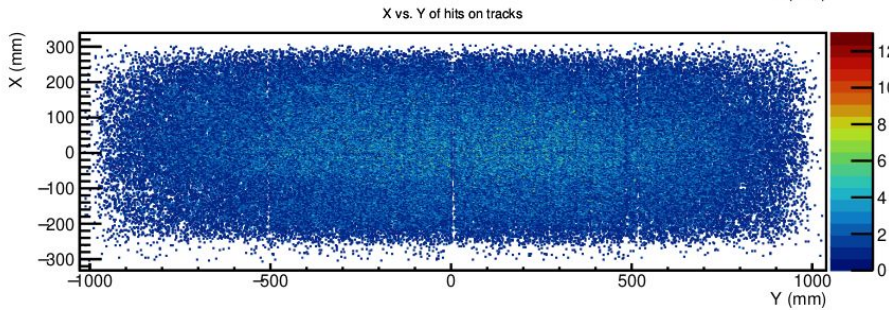
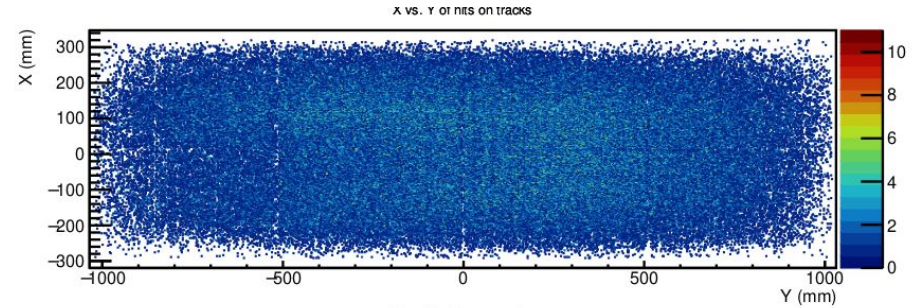
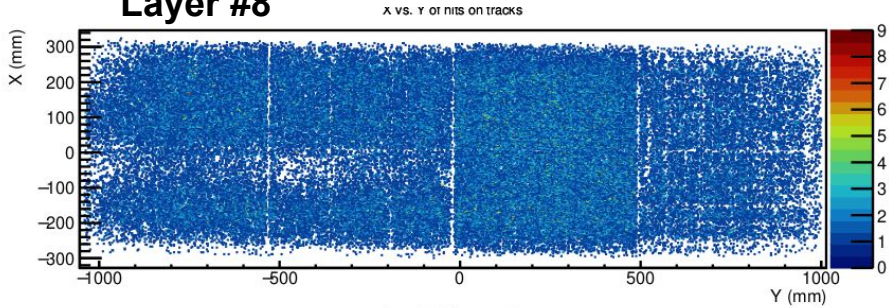
First set of data we took



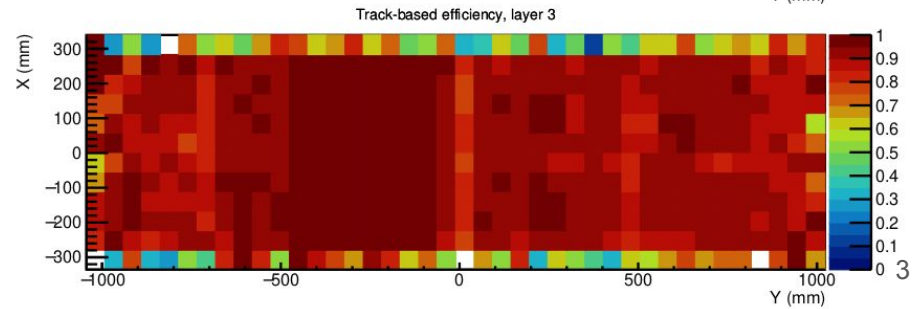
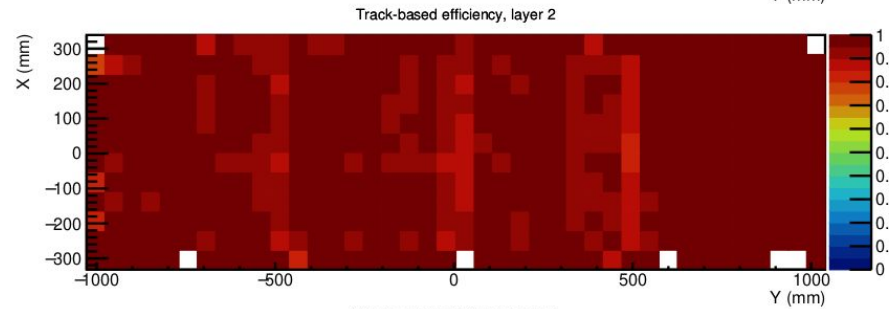
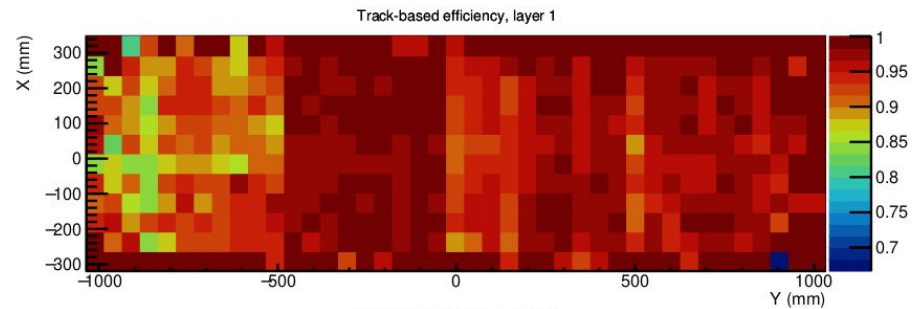
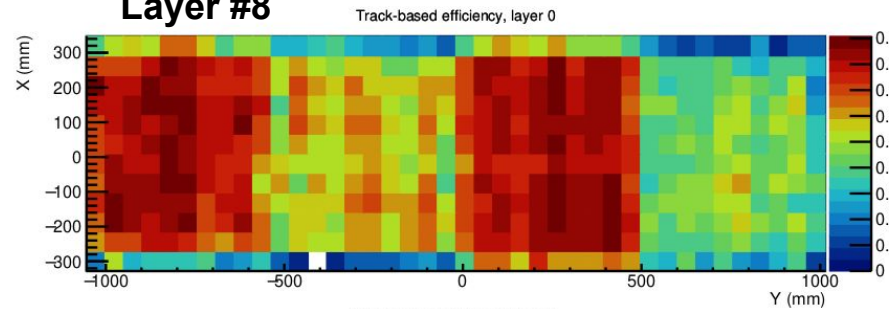
- 3 points showing low efficiency; prominent in GEM_1 and GEM_3
- 3 points were taken between two “successive” low voltage and crate power cycle events
- Can’t be an issue with the GEMs or other hardware as the other data is fine
- Didn’t see any big issues with 2-D cluster maps
- But we see a lot of single strip events in GEM_1 and GEM_3

Layer#8 at 3519 V /3950 V equivalent, other at 3653 V

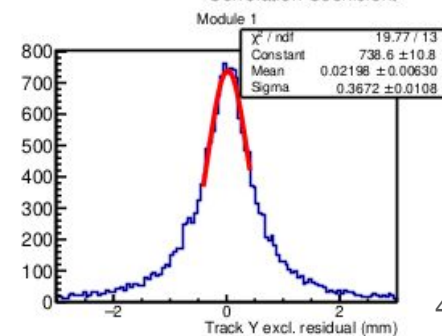
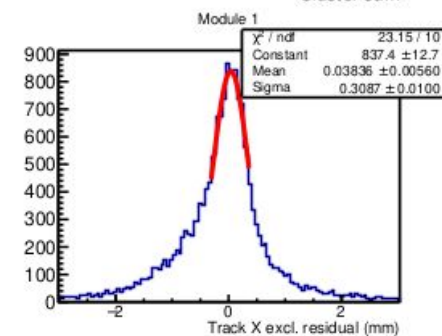
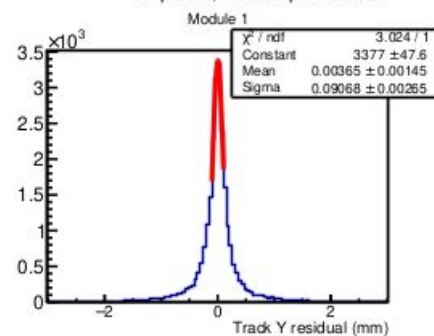
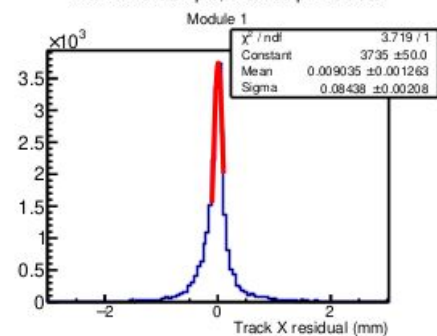
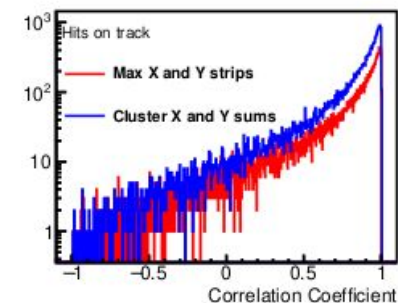
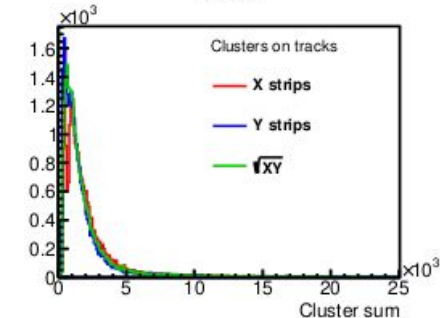
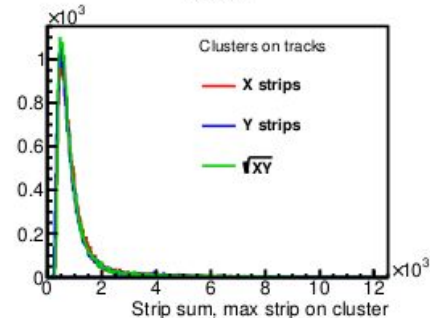
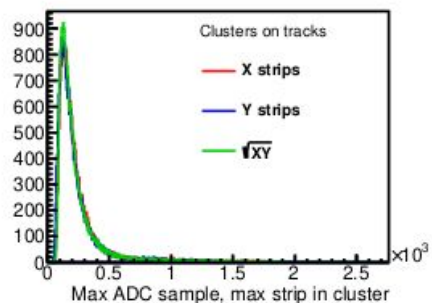
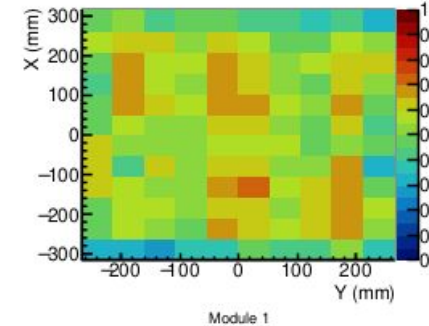
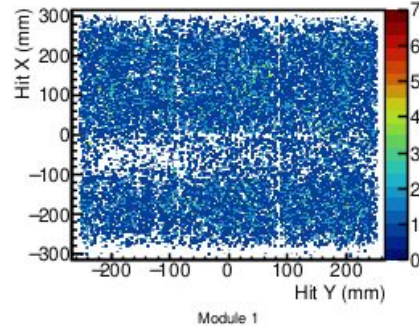
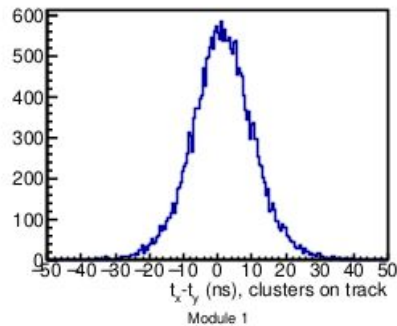
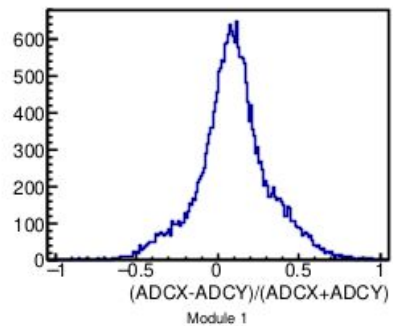
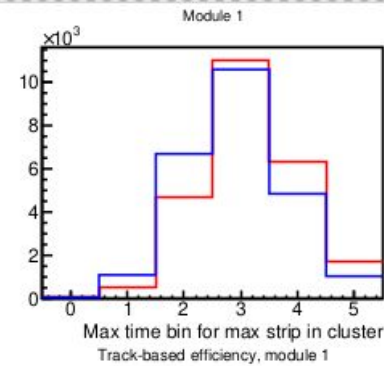
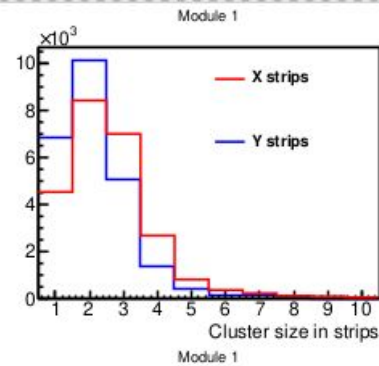
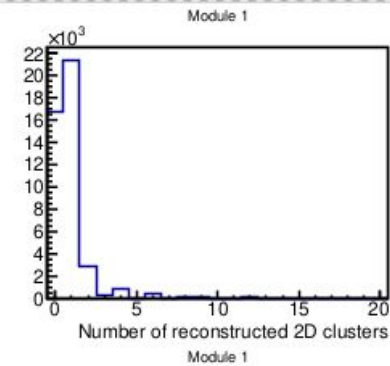
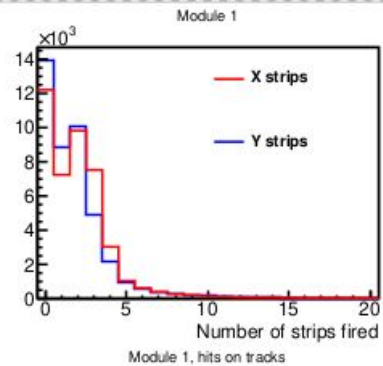
Layer #8



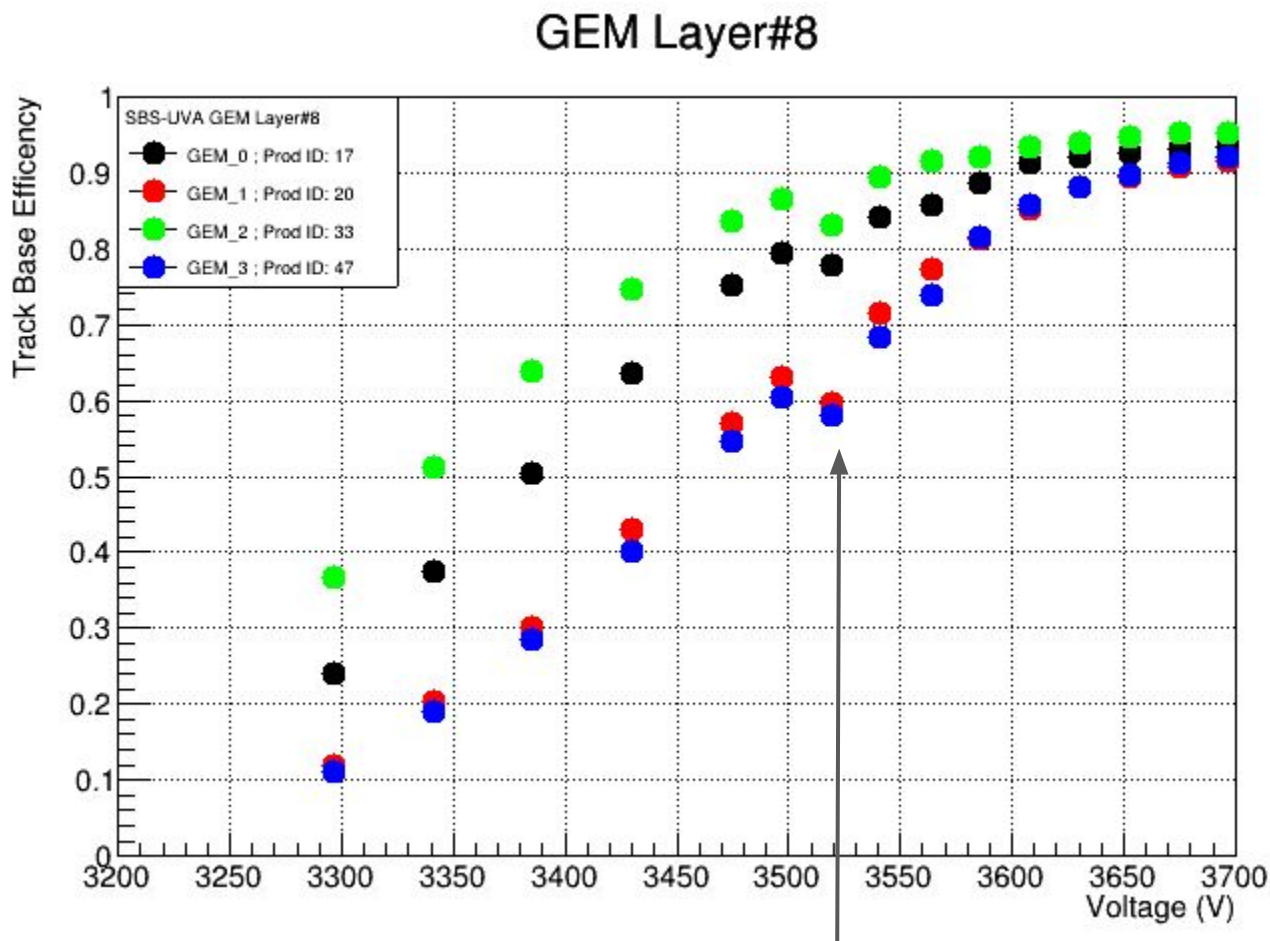
Layer #8



Track-based efficiency, layer 4



Then we retook those 3 points; improvement in 2/3



- Improvement in $\frac{2}{3}$ points
- Need to investigate further on what's causing this
- Didn't see any errors in the MPDs connected to this layer