

**RHUM Meeting:
TB2024 April updated checks**

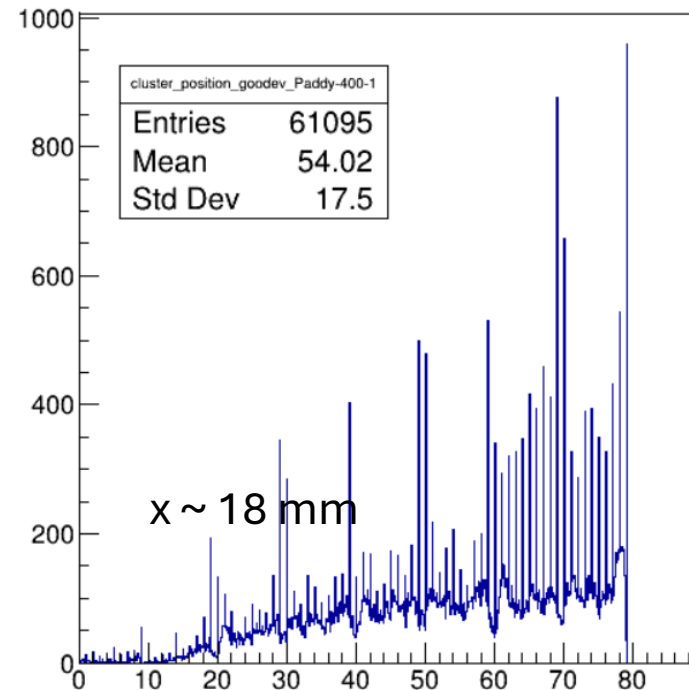
Contents

- Fast checks during TB
- «best» Time resolution of Paddy-400 sandwich (run524, V_ampl = 440V, angle 35°, ArCF4iC4H10) (to put in paper)
- Addition of a cut on cluster charge for SB-NAP?
→ Look to the cutflow with/without this cut

«best» Time resolution

TBReco vec Pad-400-1 : {1, 0, 3, 2, 5, 4, 7, 6};

Cluster position Pad-400-1



Drop every ~10 mm,
no clear idea since
x_meas vs x_ext is
quite good

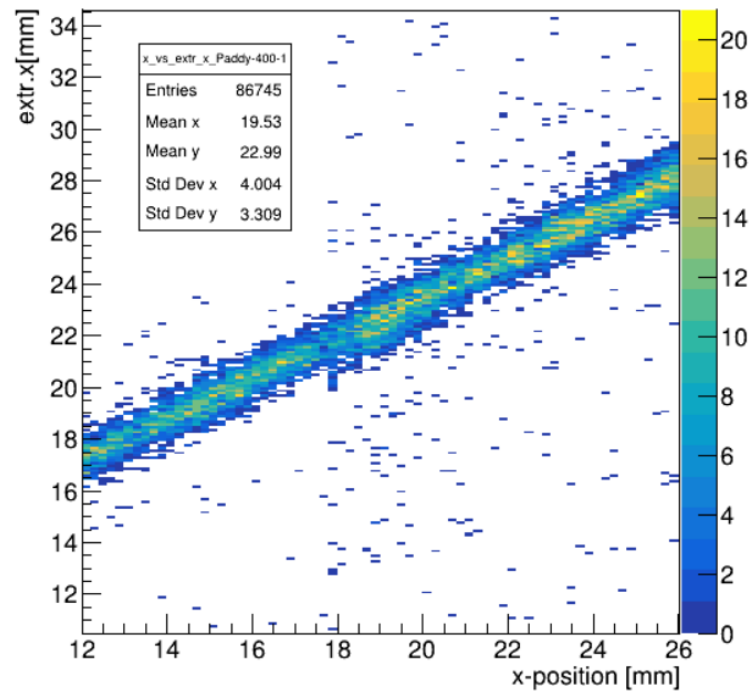
Just plugged M and S in
opposite way w.r.t. the
excel map (Pad-400-2
respects the order)

Y0 APV Slave				Y1 APV Slave				Y2 APV Slave				Y3 APV Slave			
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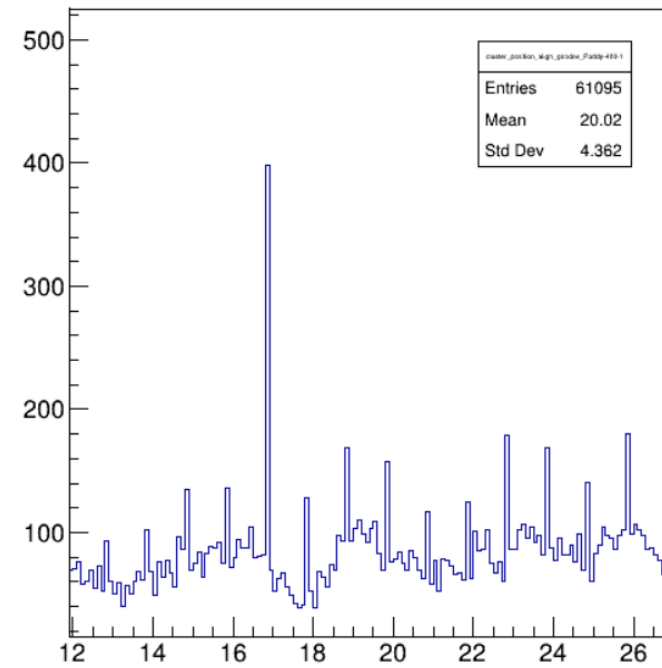
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15	6	5	7	11	26	5	27	11	52	0	53	6	72	0	73	6
16	15	5	18	11	35	5	38	11	41	0	44	6	61	0	64	6
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19	4	5	9	11	24	5	29	11	50	0	55	6	70	0	75	6
20	1	5	2	10	21	5	22									

Zoom

x vs extr.-x

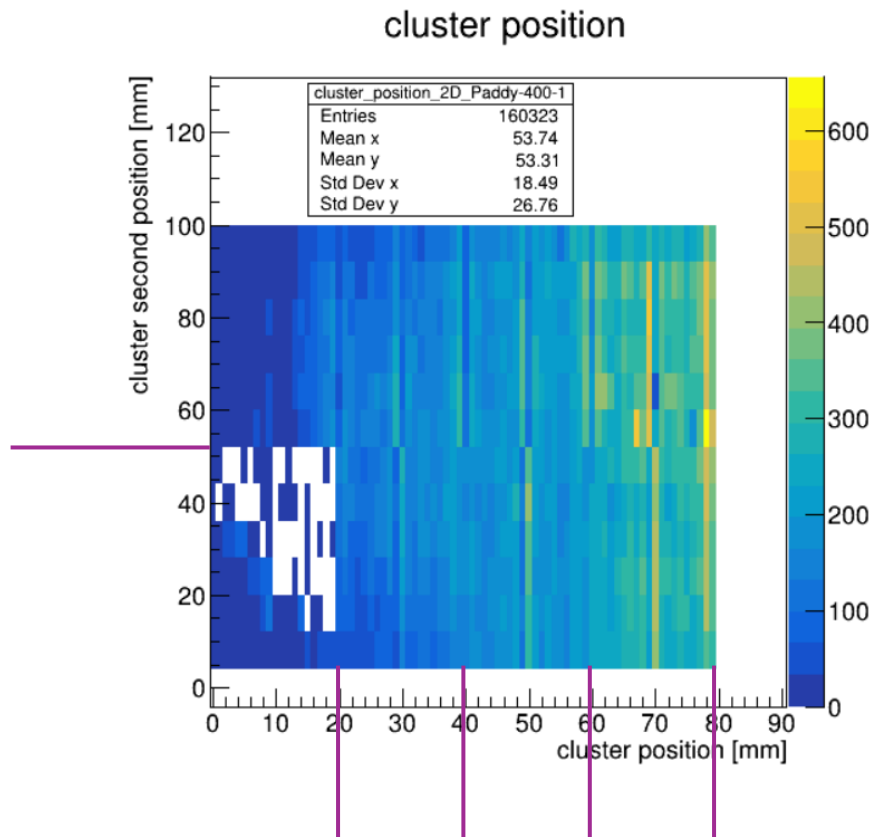


cluster_position_align

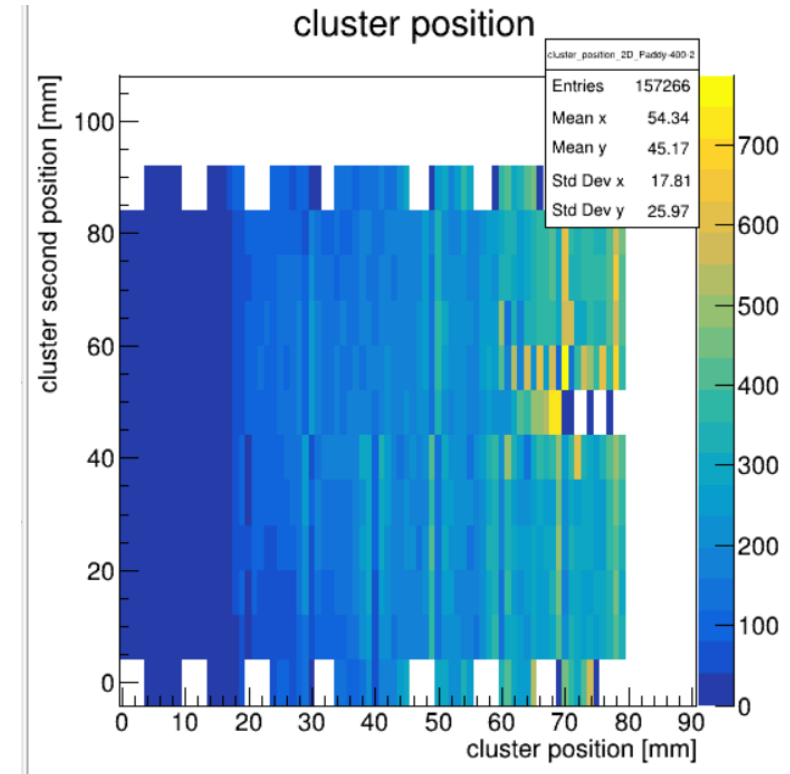


NO tracking (cluster map- 35° angle)

Pad-400-1

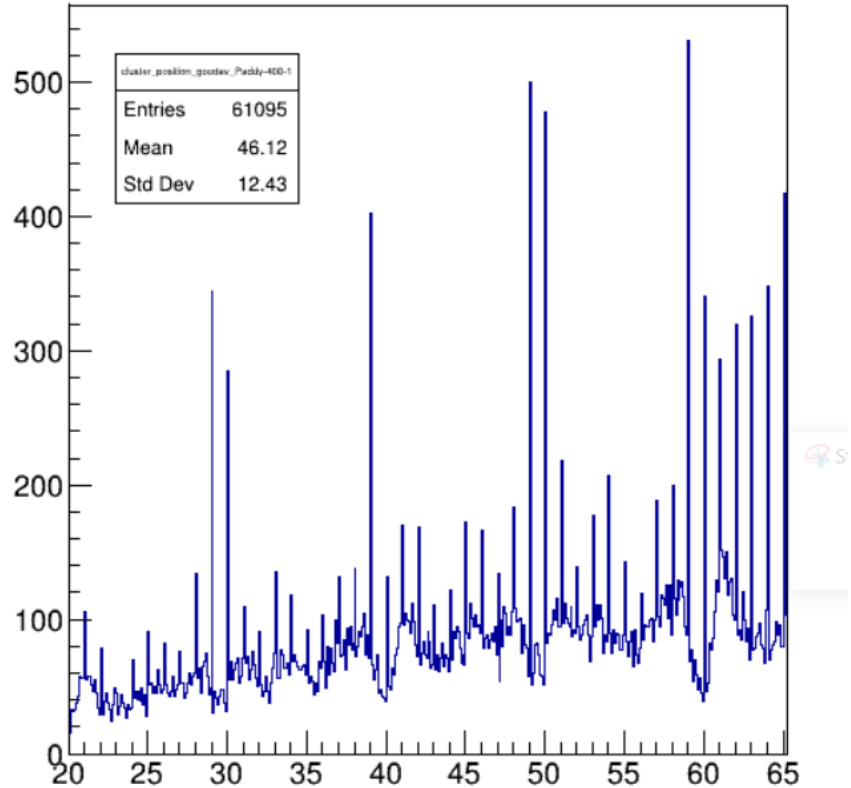


Pad-400-2



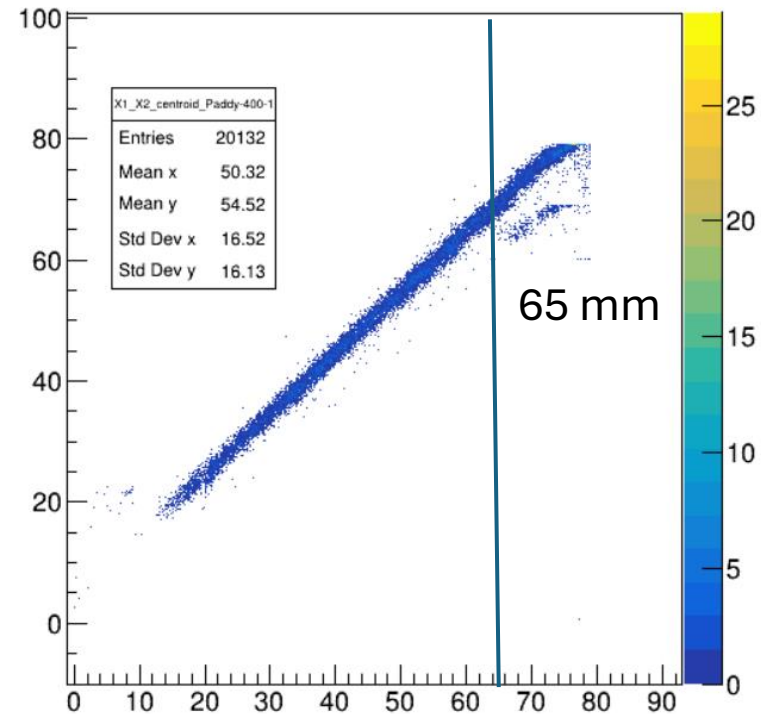
Investigations in different ranges

cluster_position



- Range ALL:
- Range 0 (mm) : $20 < x < 65$ (central)
- Range 1: $51 < x < 58$
- Range 2: $20 < x < 58.8$ & $61.2 < x < 65$ (on Paddy-400-1)
- Range 3: $58.8 < x < 61.2$

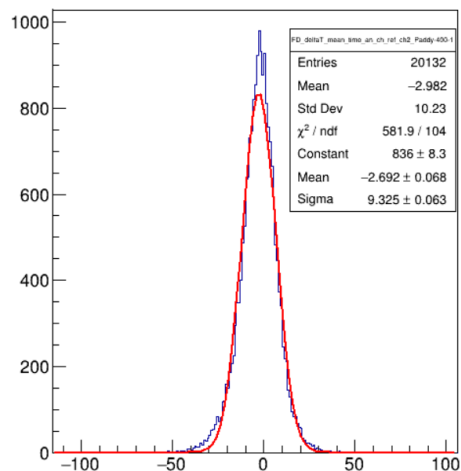
centroid X1 vs X2



Time distributions

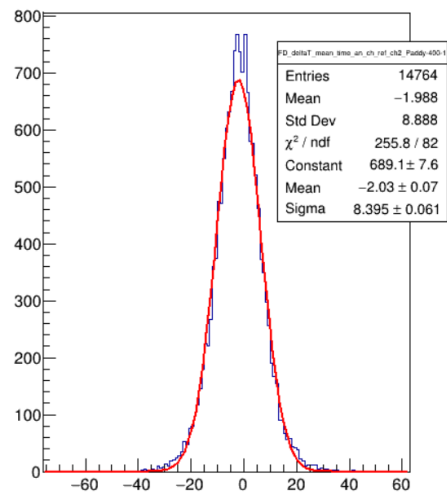
Running Range 2,3 again

deltaT_mean_time_an_ch_ref_ch



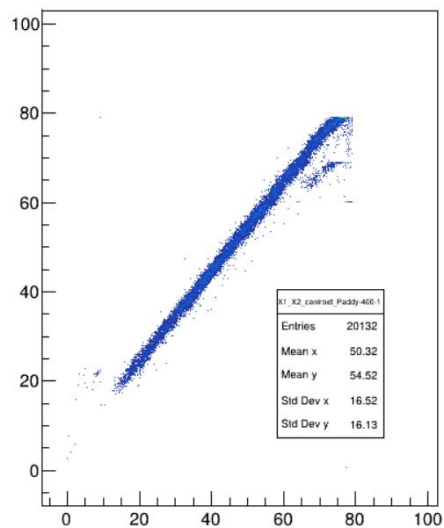
Range ALL
(central+lat)

deltaT_mean_time_an_ch_ref_ch

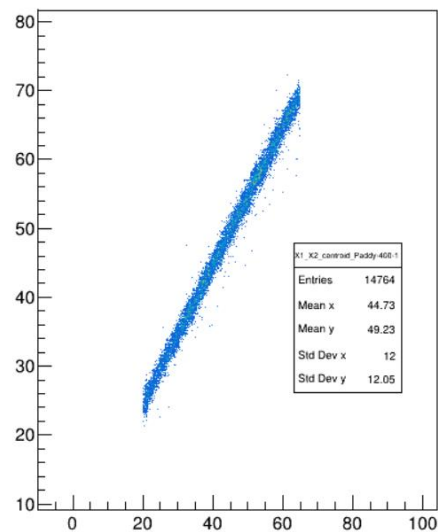


Range 0 (central)

centroid X1 vs X2



centroid X1 vs X2

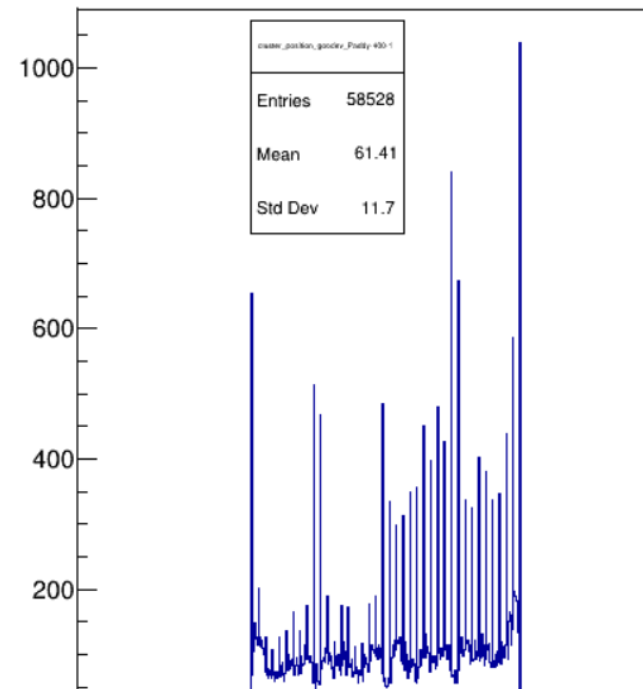
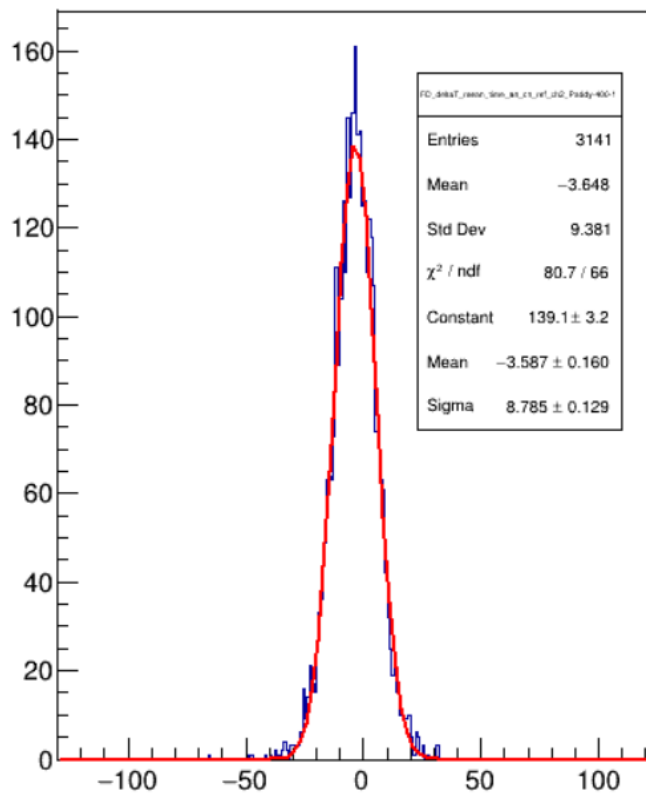
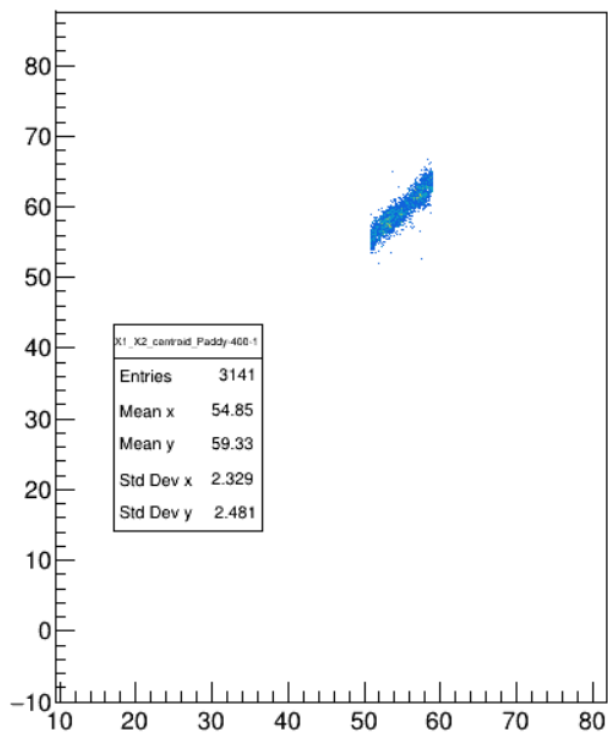


Run534 (range 1)

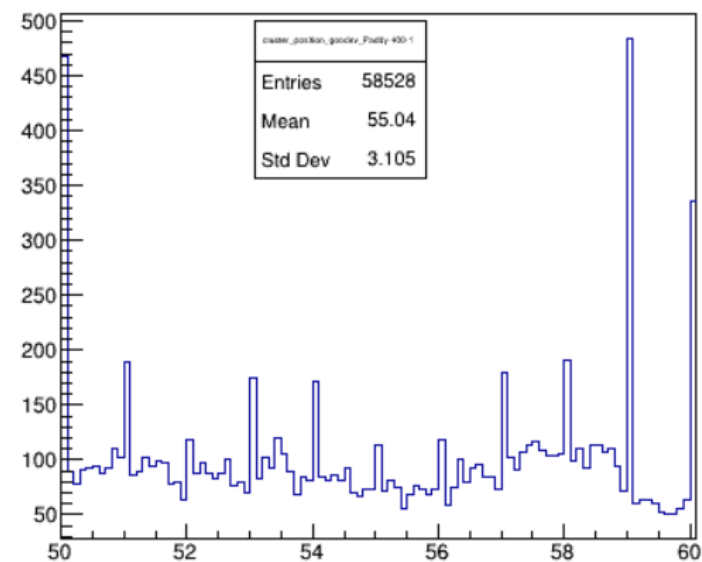
Range 1: $51 < x < 58$

deltaT_mean_time_an_ch_ref_ch

centroid X1 vs X2

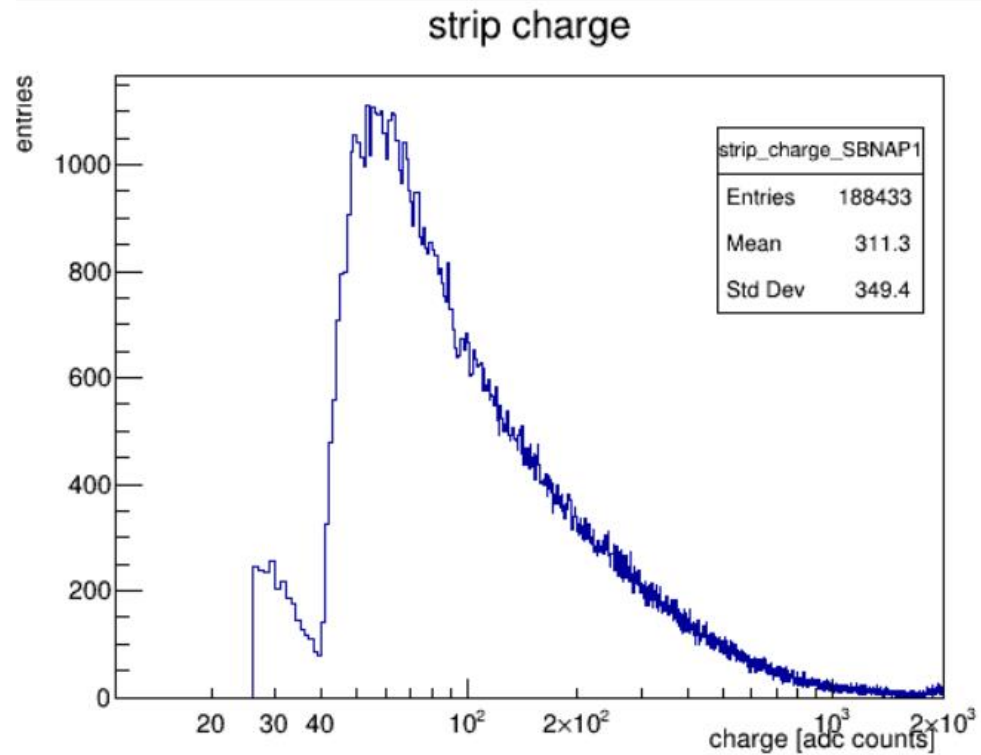


cluster_position

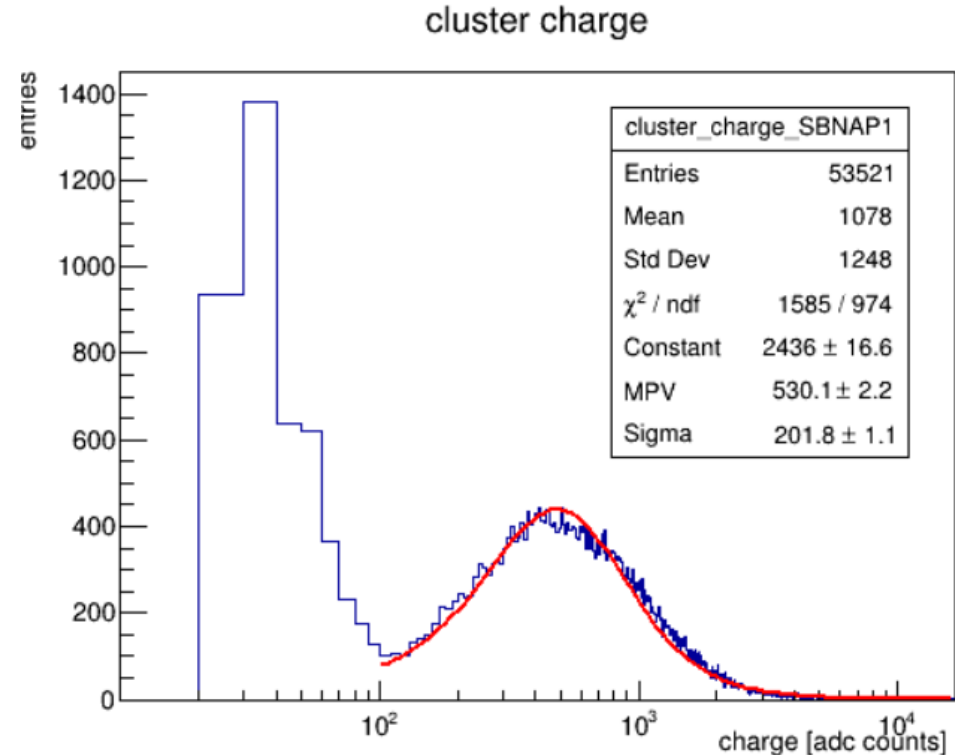


SBNAP1

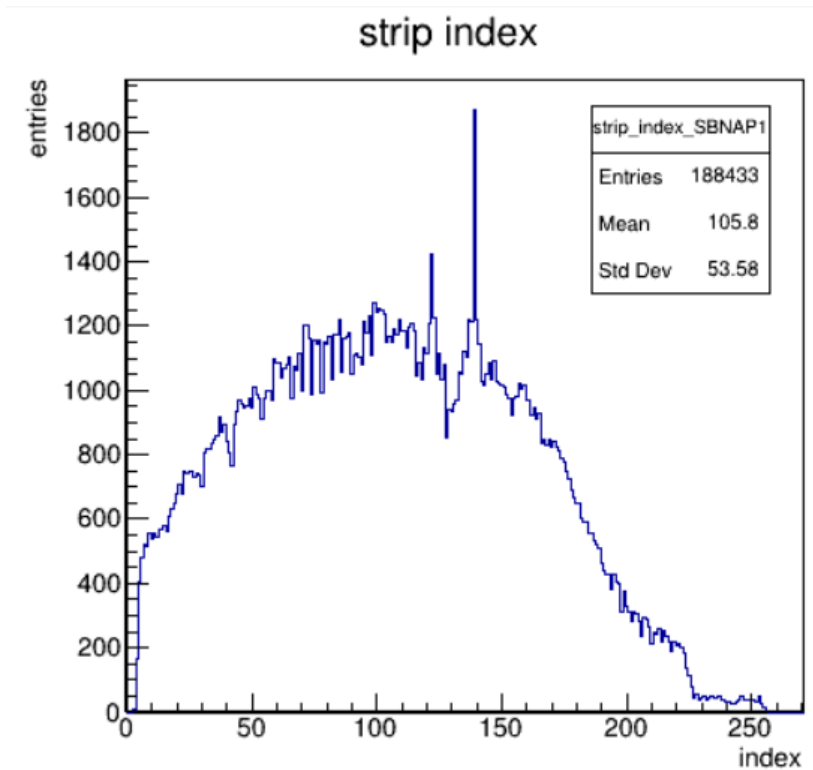
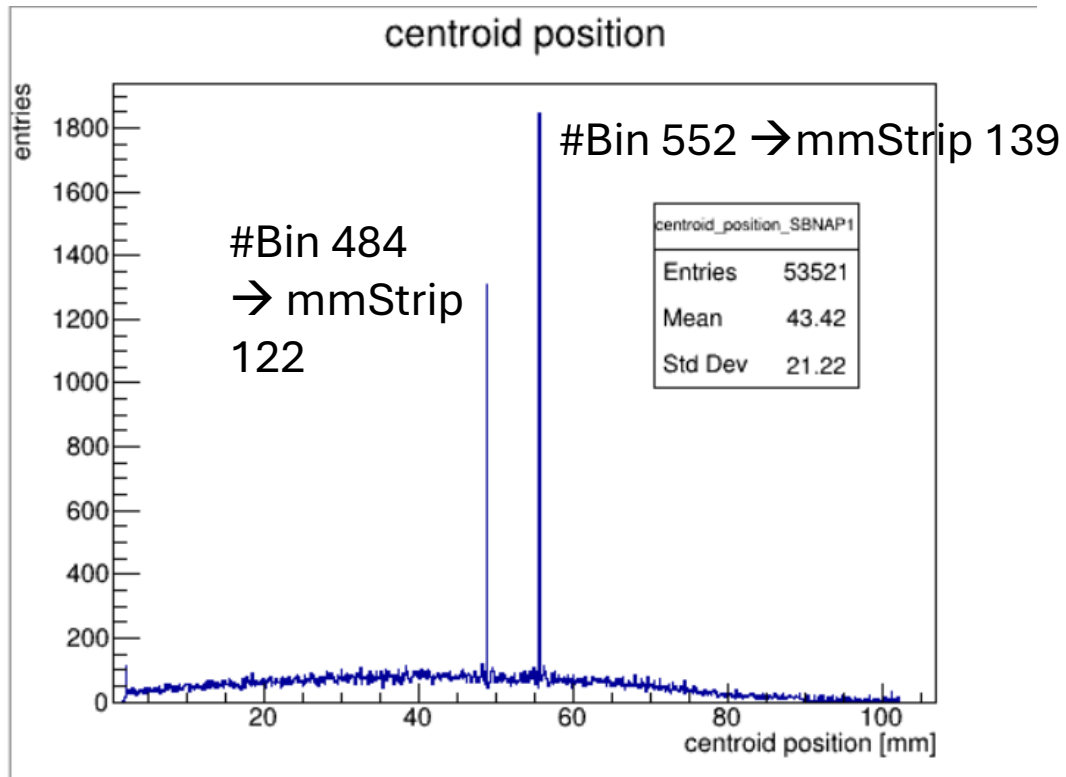
Strip charge (X view)



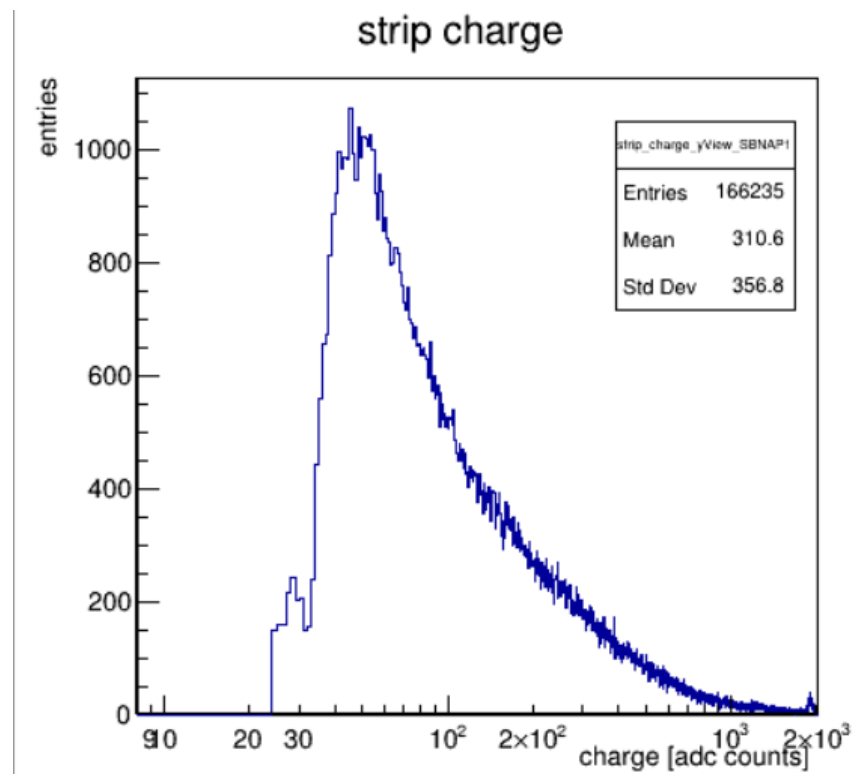
Cluster charge (X view)



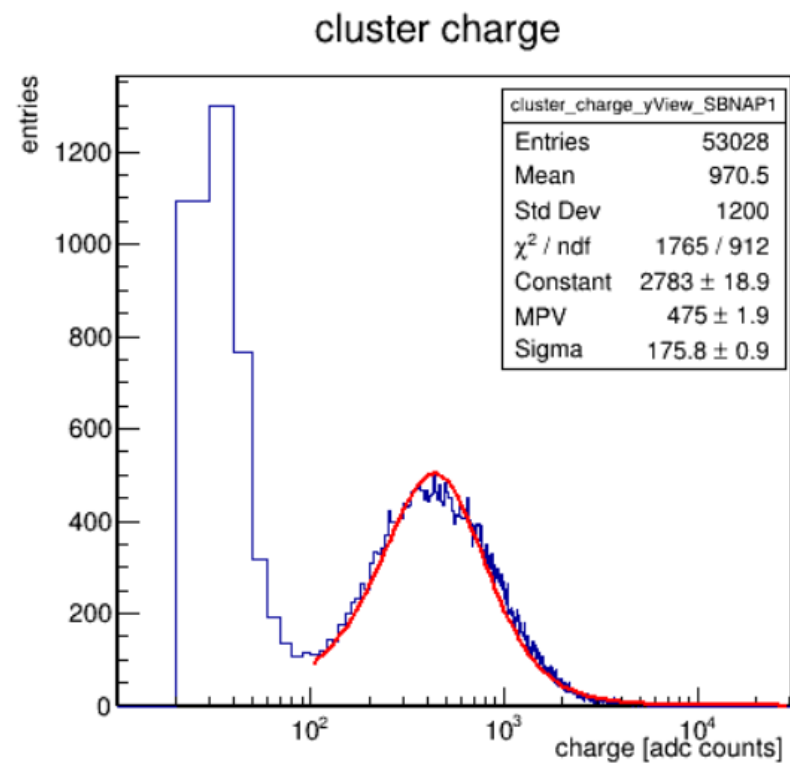
1D cluster position



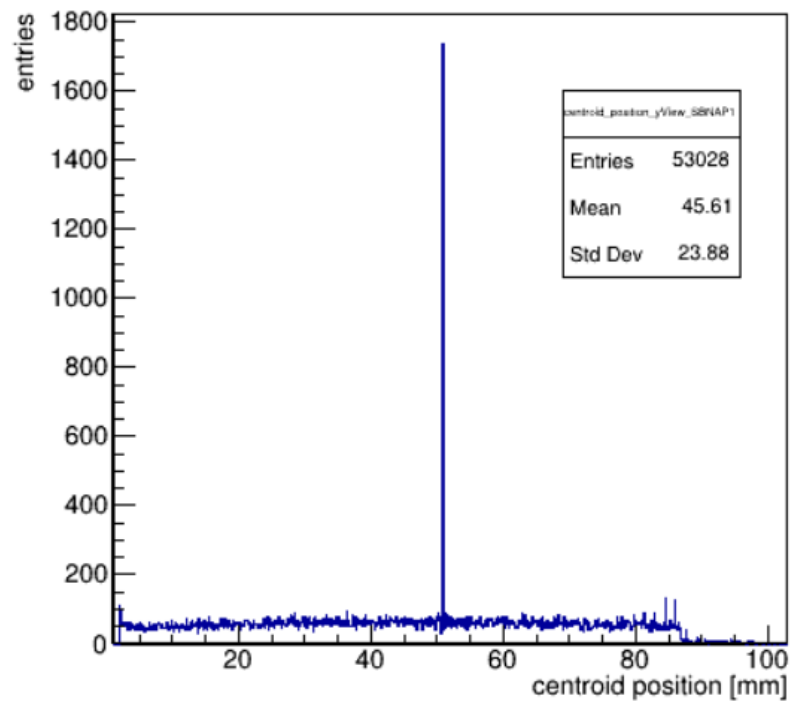
Strip charge (Y view)



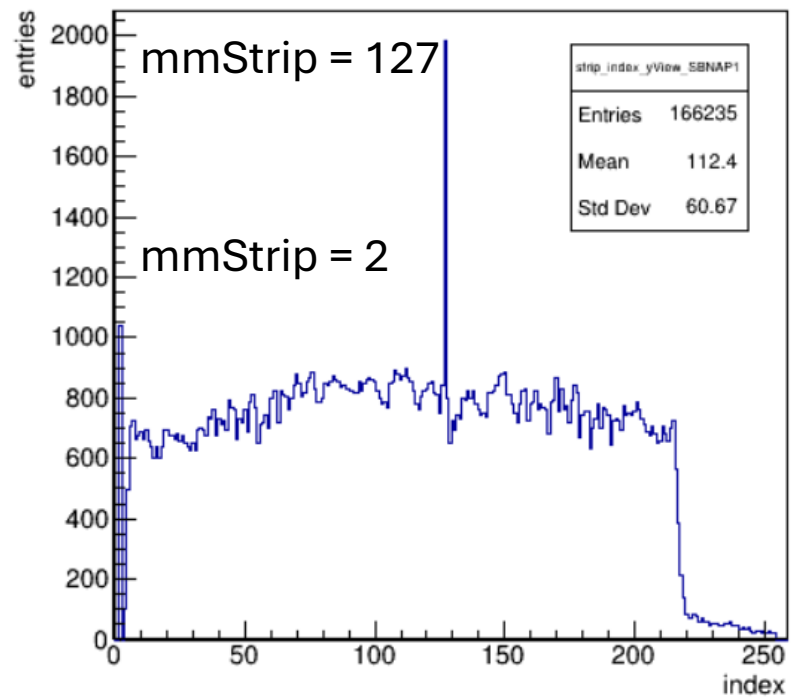
Cluster charge (Y view)



centroid position



strip index

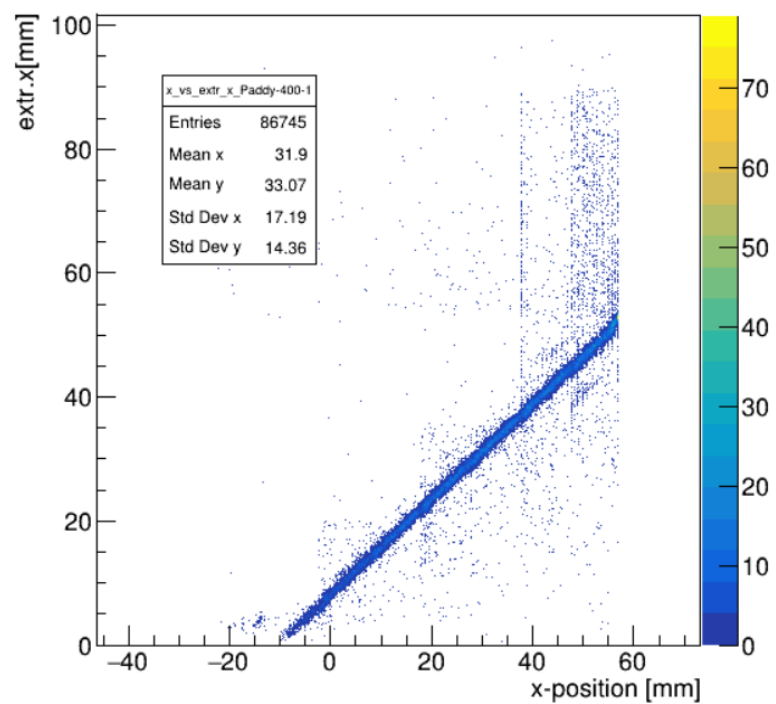


Conclusion

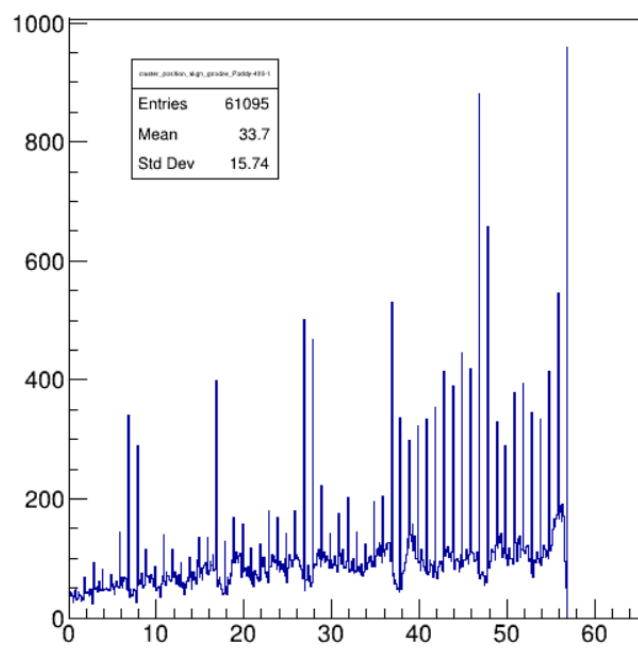
- Holes seem to not affect time resolution
- No correlated events in the lateral zone affect time resolution
- TO DO: time resolution with histo entries 5k, 15k, 30k, all
- Mapping (look at run403 and XX)
 - Y of CS detectors
 - PAD2000

Back-up

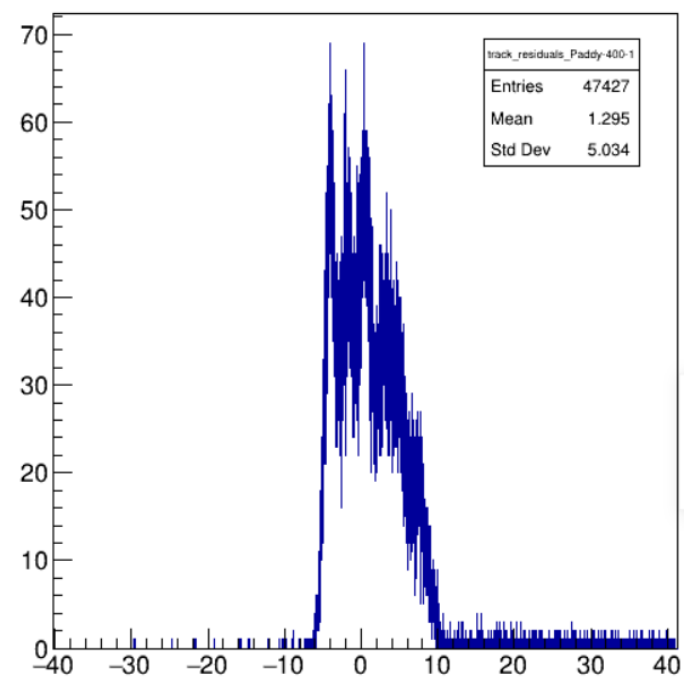
x vs extr.-x



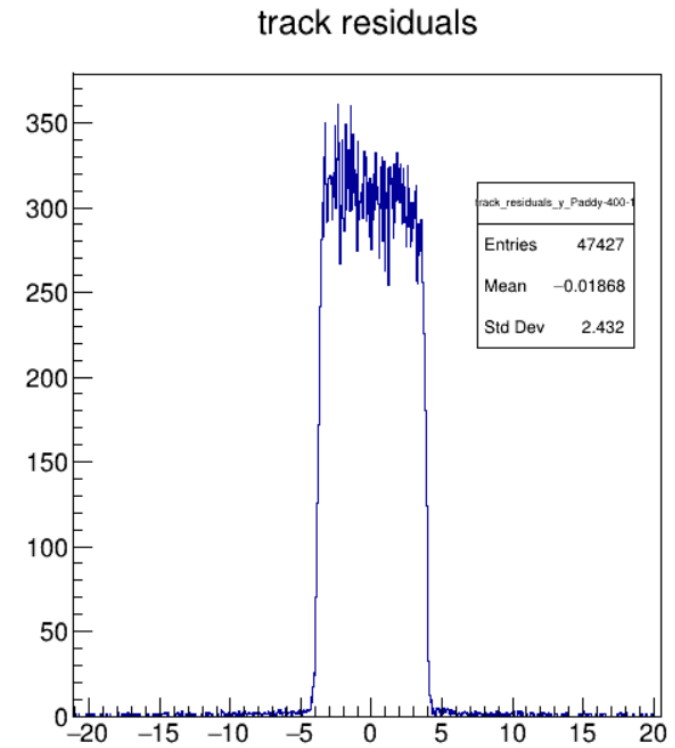
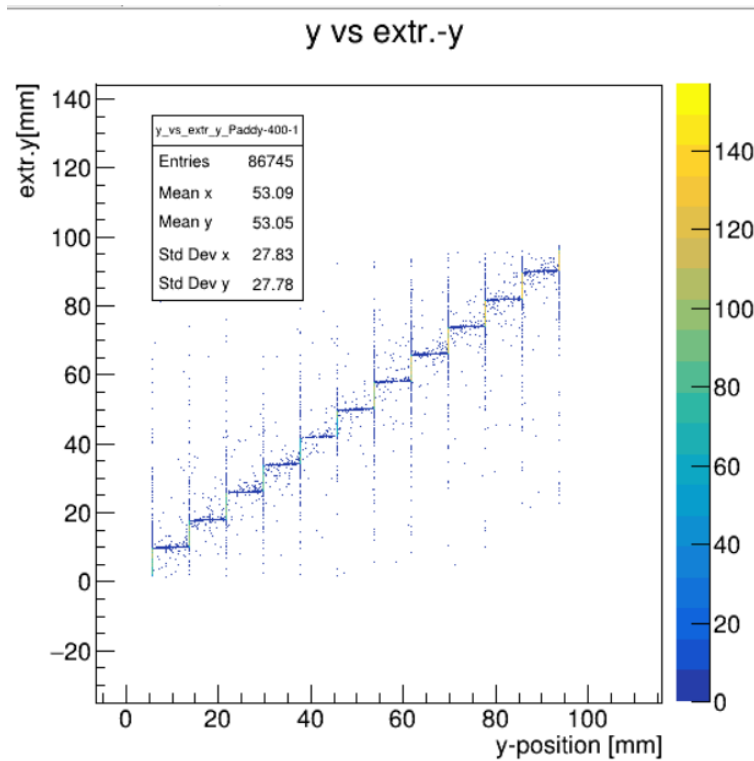
cluster_position_align



track residuals

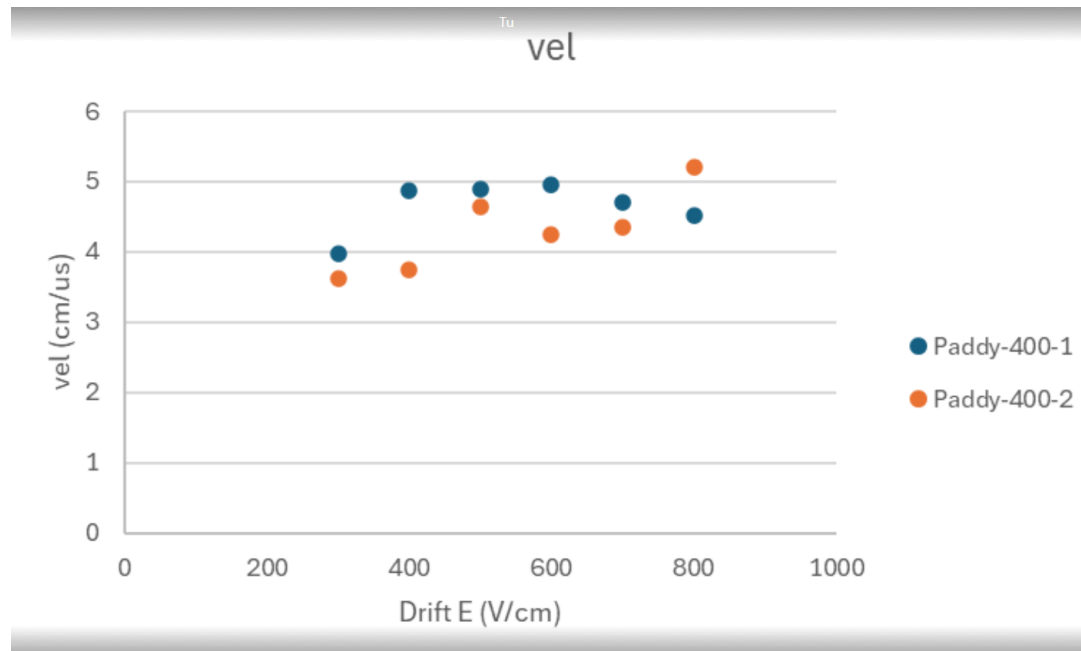


Y-view (no rotation)

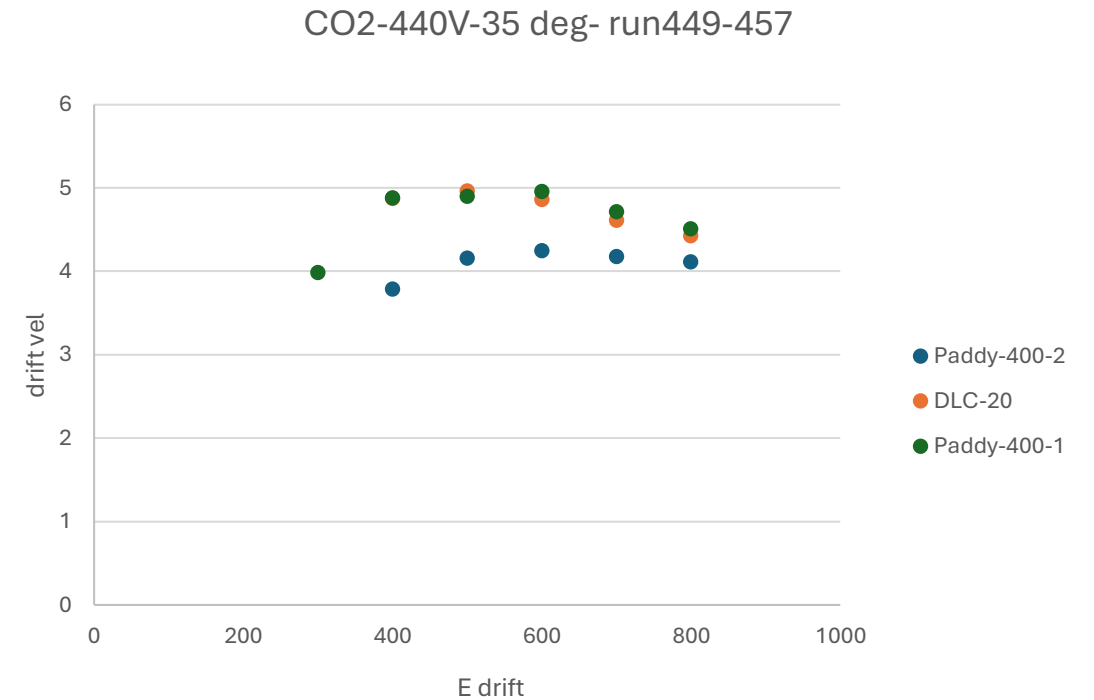


Velocity measurements (2024 with CO₂)

Paddy-400-1, Paddy-400-2



Paddy-400-1 (same of left), Paddy-400-2 (other dataset), DLC-20



Small stat, small geom accept