

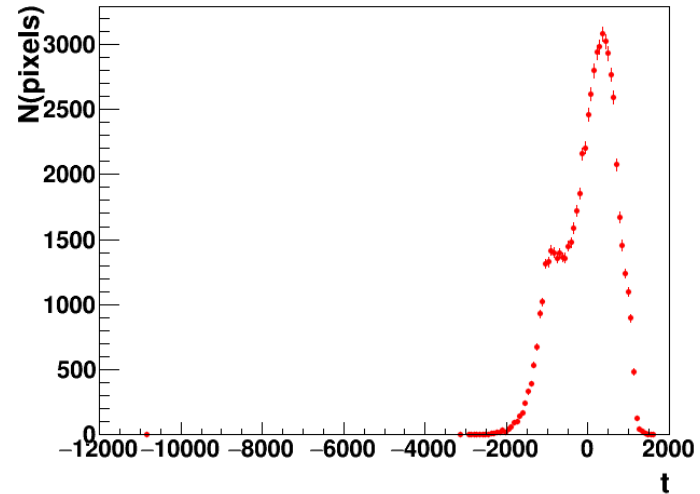
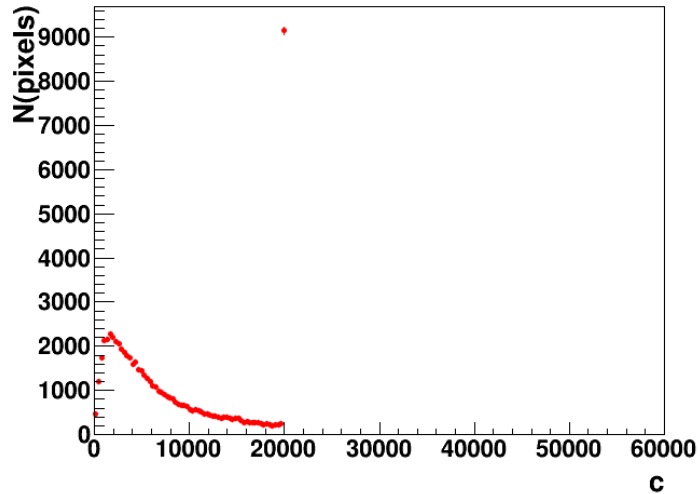
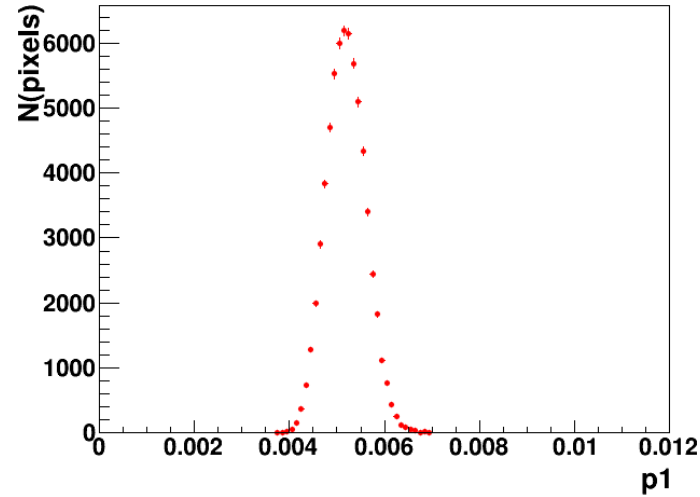
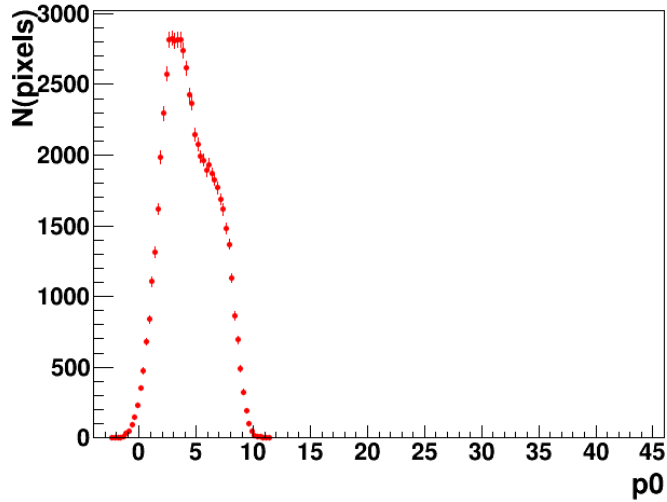


# Weekly meeting

6 December 2018

Peter Bosch

# Charge calibration

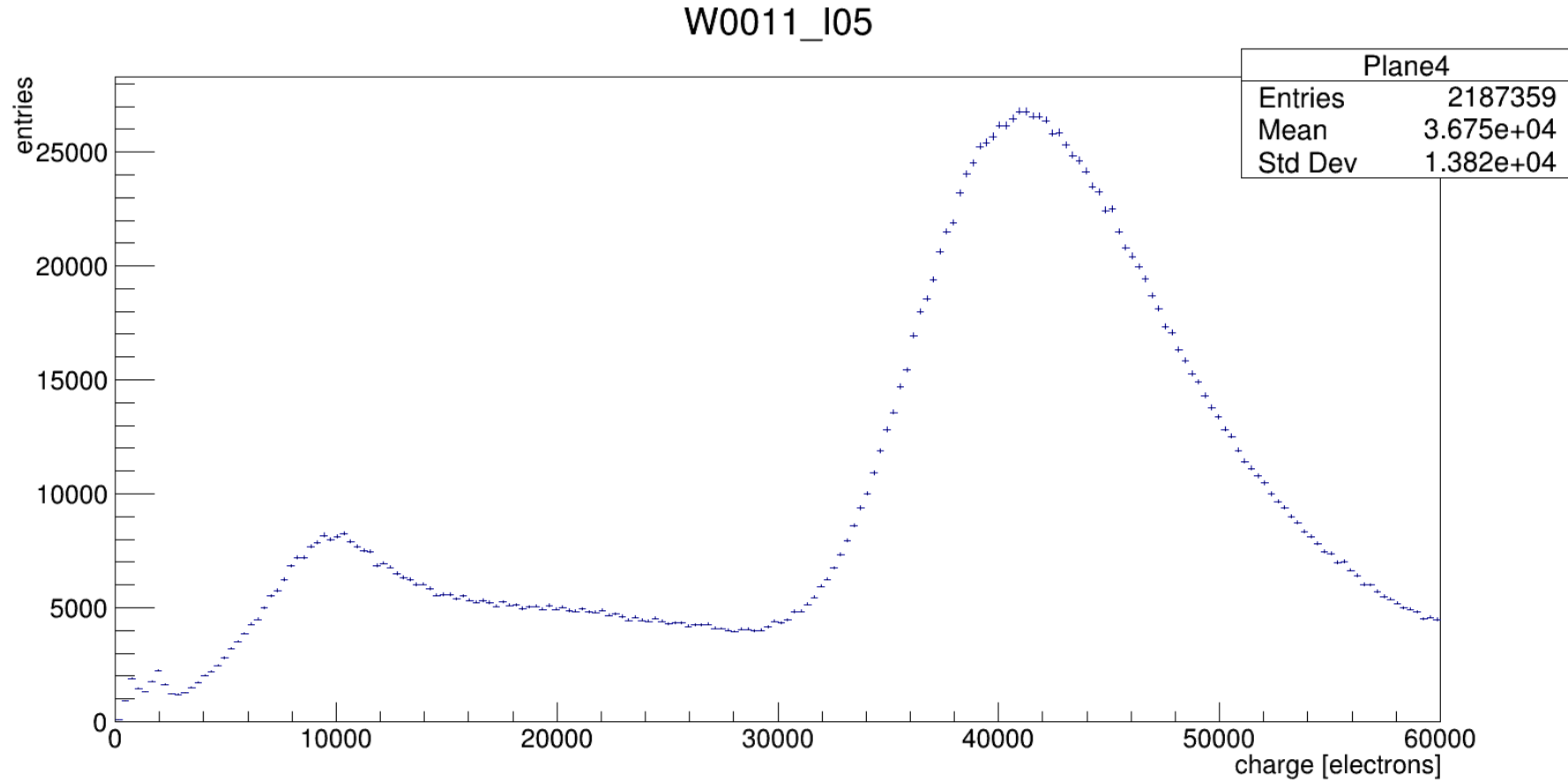


Charge W0039 I11

## fit function  $\text{ToT} = f(q) = [p_0 + p_1 \cdot q - c / (q - t)]$

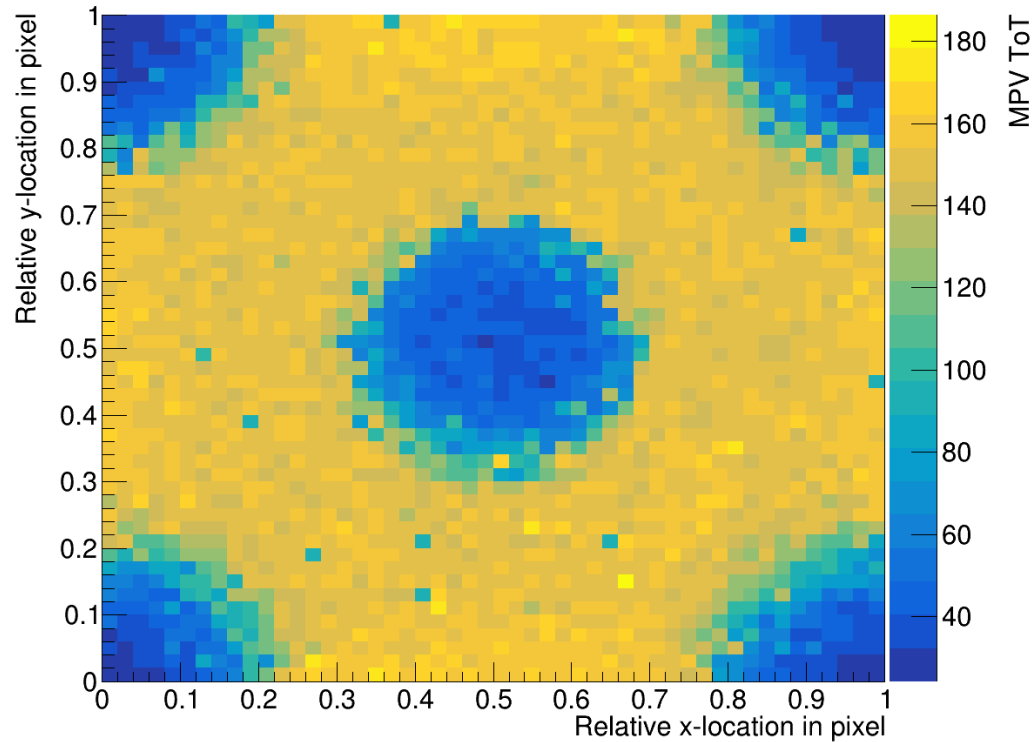
##	col	row	$p_0$	$p_1$	$c$	$t$
0	0	4.61325	0.00442919	4967.05	120.008	
0	1	3.81098	0.00489621	4918.66	79.6652	
0	2	4.25714	0.00485367	4419.45	165.137	
0	3	2.70498	0.00472412	1082	744.943	
0	4	2.75589	0.00524319	1520.64	616.683	
0	5	5.31793	0.00460958	5908	-208.665	
0	6	4.15888	0.00489319	6828.79	-33.9263	
0	7	6.47306	0.00442519	11543.8	-925.376	
0	8	3.52458	0.00452642	1161.25	601.03	
0	9	2.75856	0.0047238	2076.74	398.131	
0	10	4.83886	0.00460487	9442.65	-448.111	
0	11	4.18212	0.00470444	6402.72	17.3256	
0	12	3.76333	0.00487709	6065.39	36.4604	
0	13	3.65646	0.00497421	3585.3	324.161	
0	14	4.44181	0.00416606	5157.07	125.286	
0	15	4.96369	0.00469115	8424.73	-345.049	
0	16	4.92691	0.00452583	5721.23	31.4468	
0	17	5.106	0.00432626	6414.9	-85.3841	
0	18	4.55255	0.00452322	6039.14	-6.41372	
0	19	3.51306	0.00438605	2032.72	593.594	
0	20	2.45563	0.0049087	1570.45	605.985	
0	21	4.76524	0.00466668	4811.03	-69.3117	
0	22	4.05114	0.00471072	5217.53	137.814	
0	23	4.20592	0.00457928	3778	206.484	
0	24	3.45334	0.00457113	1987.25	478.724	
0	25	2.9366	0.00479049	2224.08	360.971	
0	26	5.3198	0.00418829	8552.41	-297.273	
0	27	4.01486	0.0041043	3362.56	366.769	
0	28	4.76571	0.00447897	9421.75	-279.461	
0	29	3.82764	0.00475063	3939.62	296.172	
0	30	5.28924	0.00464815	8444.61	-165.916	
0	31	5.26474	0.00442317	8218.58	-326.795	
0	32	4.70604	0.0049462	5899.16	100.904	
0	33	4.42925	0.00460069	5745.15	-35.9	

# Charge calibration

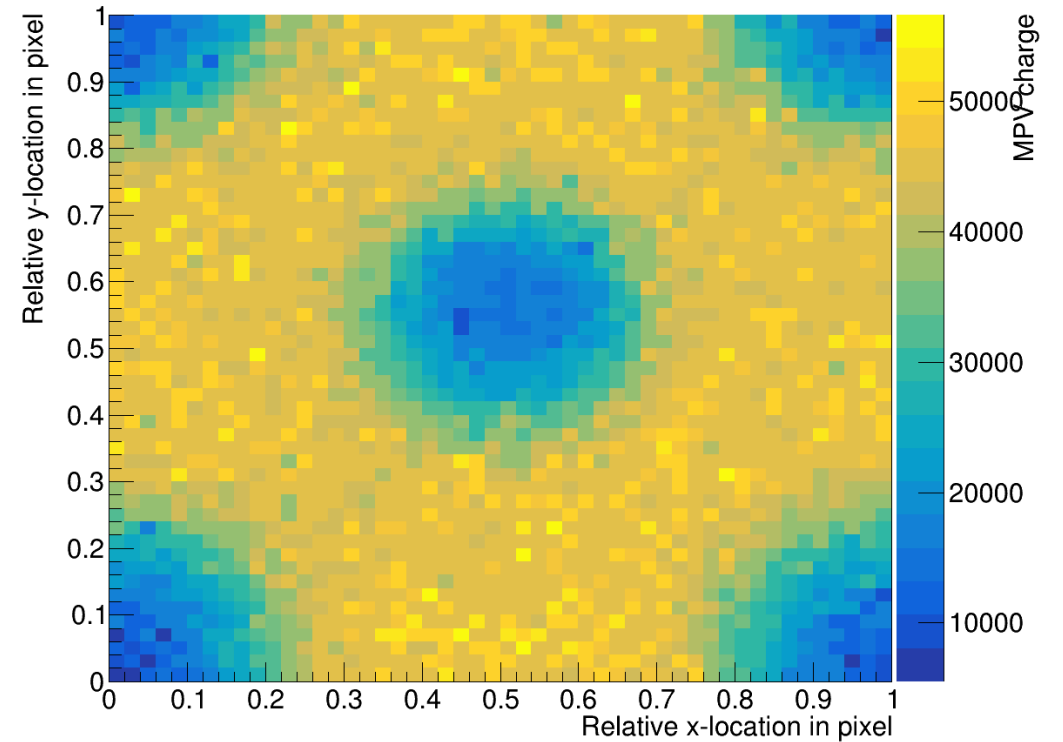


# Sub-pixel maps: ToT $\rightarrow$ charge

ToT map (Run 31618, 285  $\mu$ m 3D, Vbias 40V, 0 degrees)

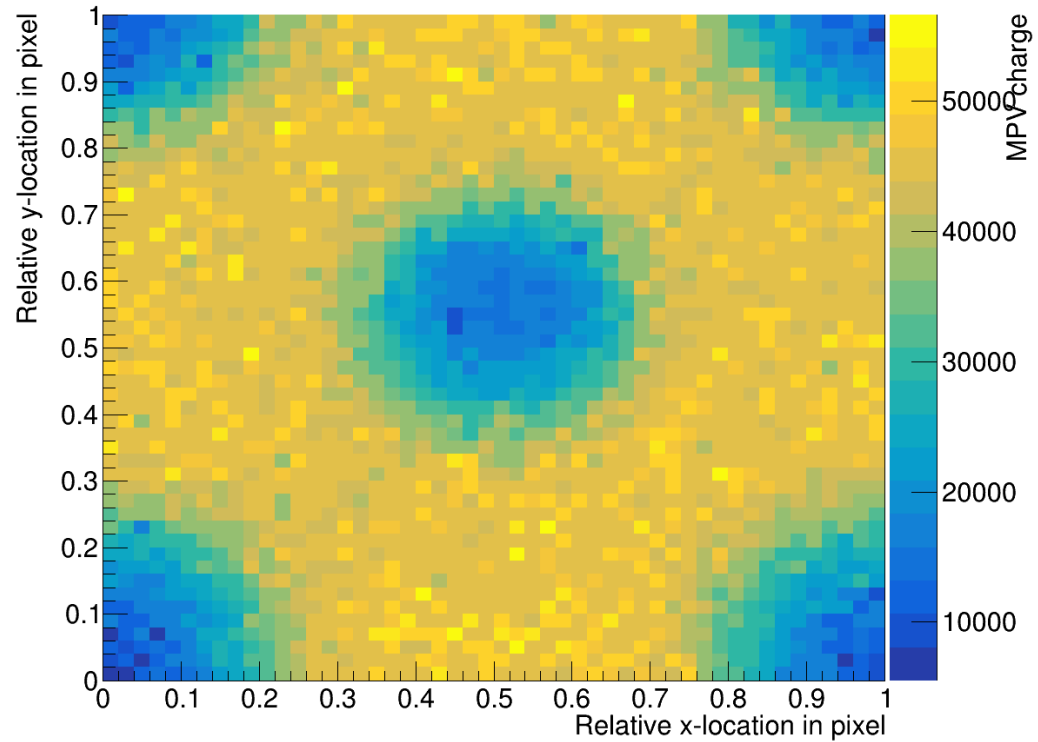


Charge map (Run 31618, 285  $\mu$ m 3D, Vbias 40V, 0 degrees)

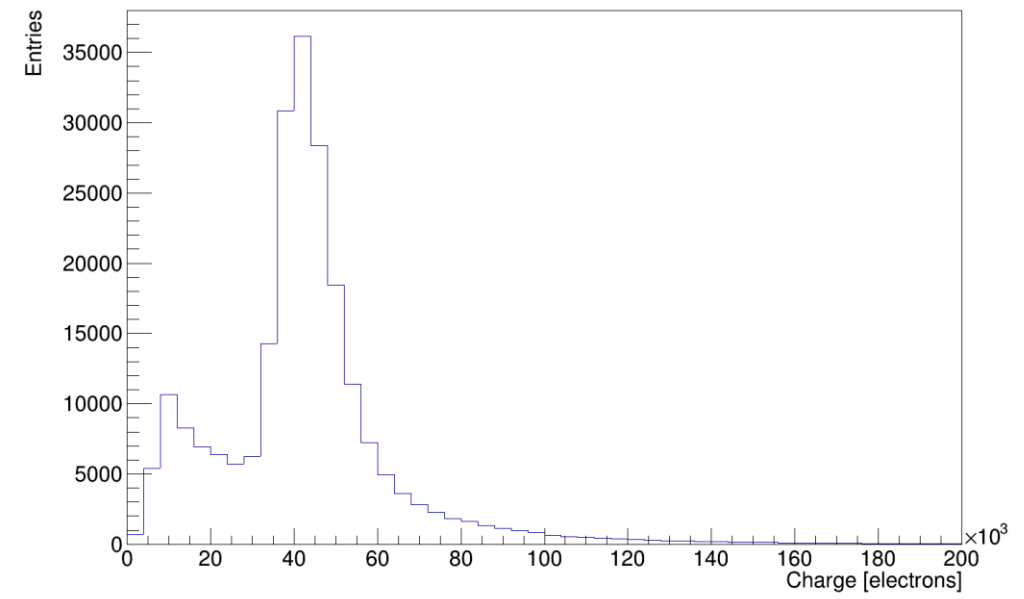


# Sub-pixel charge map

Charge map (Run 31618, 285 um 3D, Vbias 40V, 0 degrees)

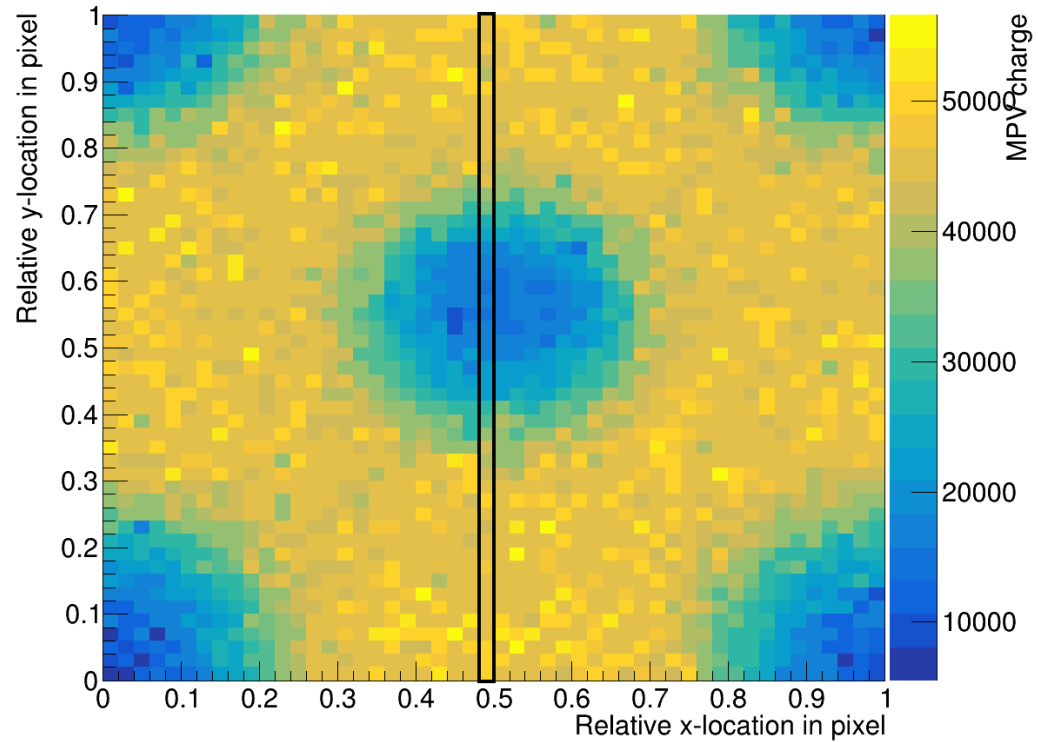


Charge distribution for part 8

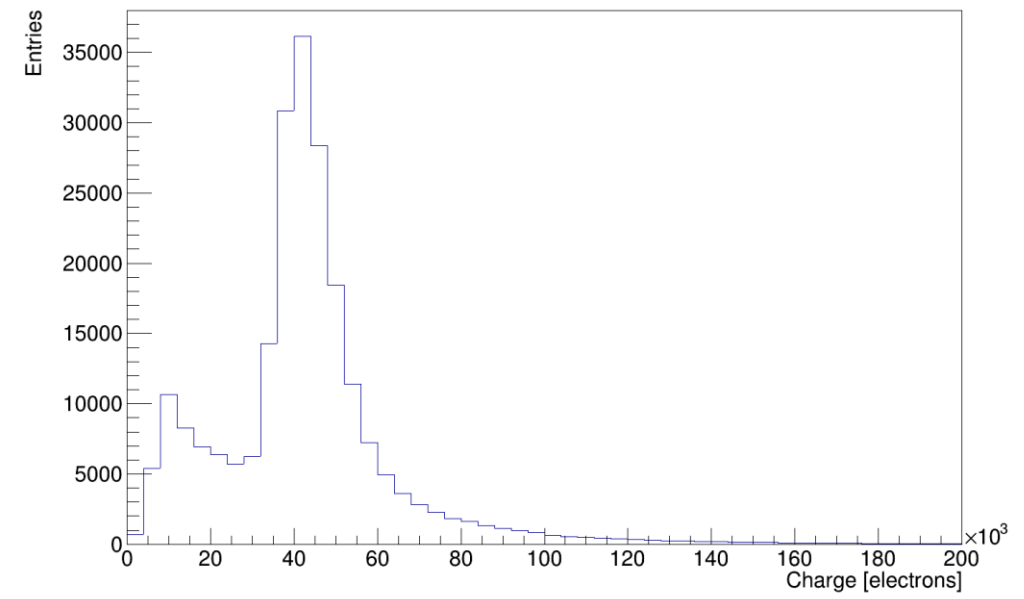


# Sub-pixel charge map

Charge map (Run 31618, 285 um 3D, Vbias 40V, 0 degrees)

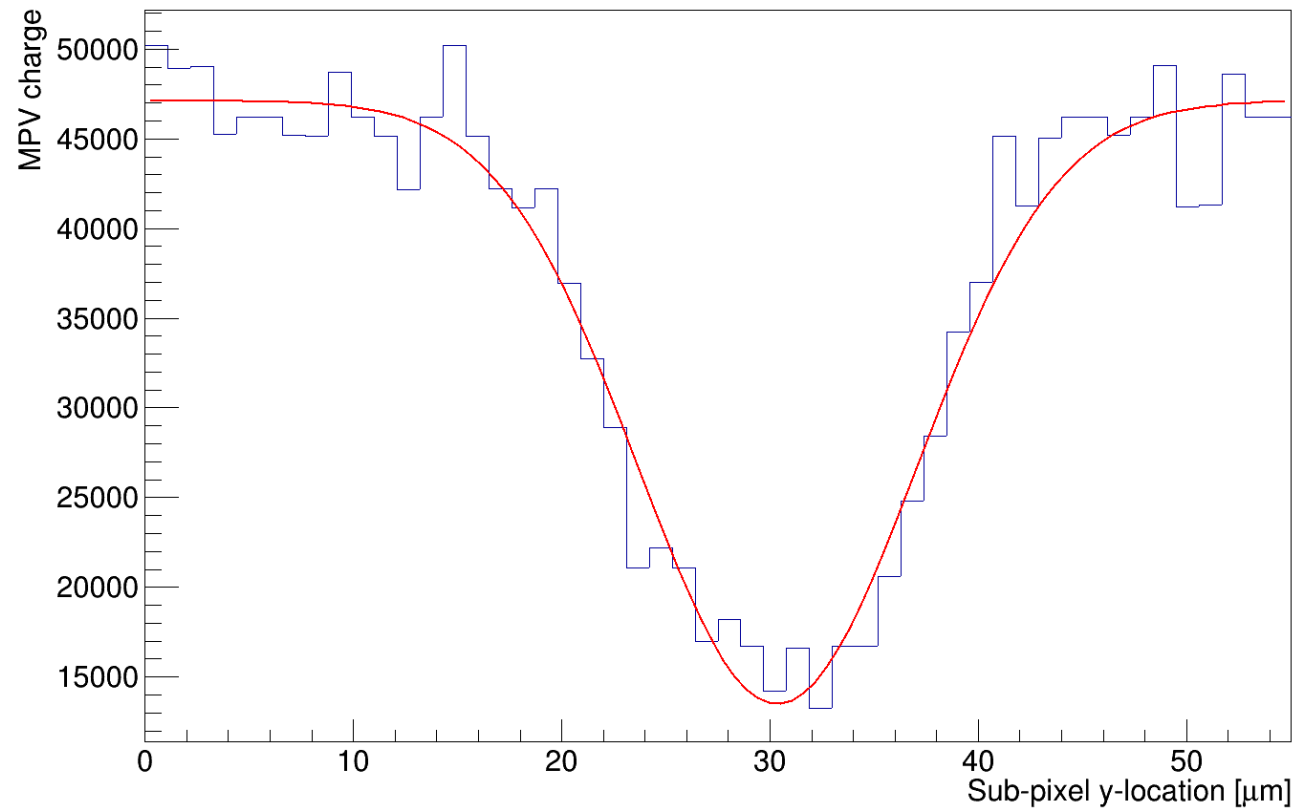


Charge distribution for part 8



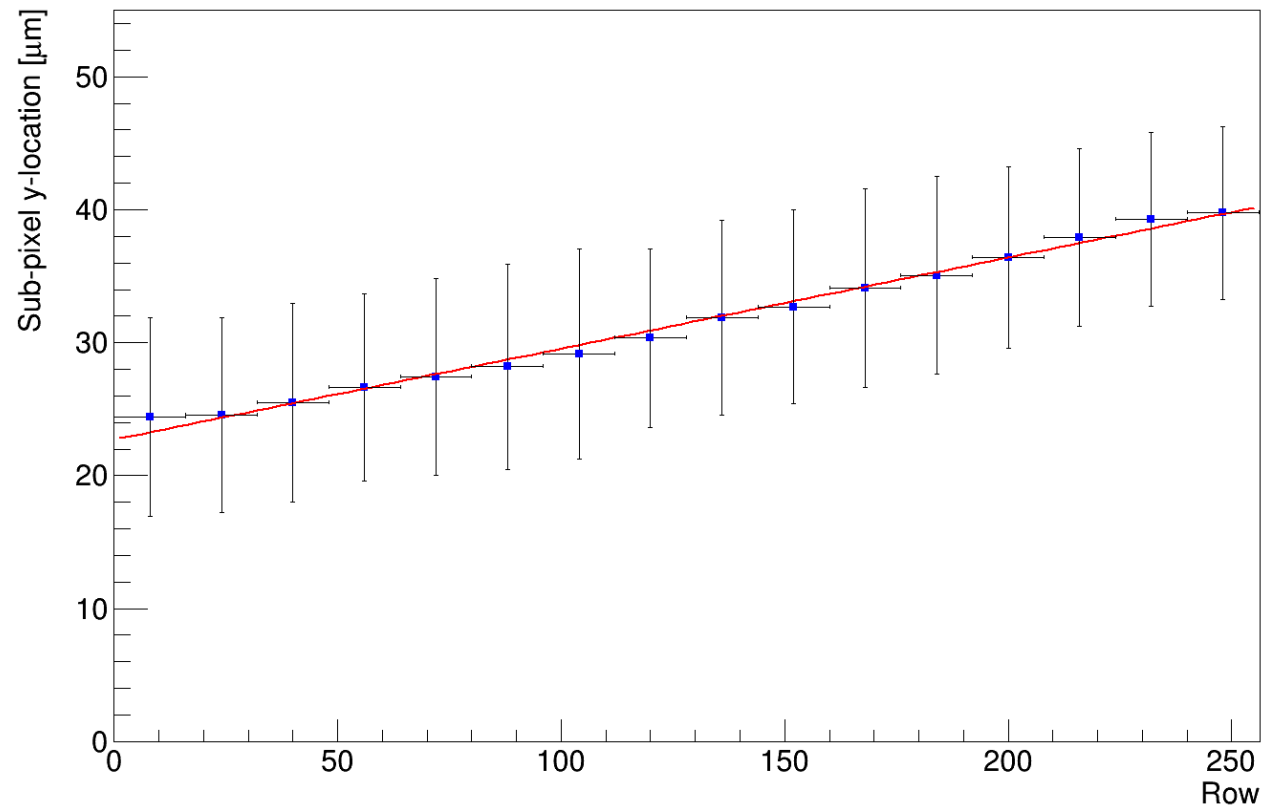
# Sub-pixel charge map

Charge distribution for middle column, part 8



# Sub-pixel charge map

Y-location of the middle pillar using gaussian fit





# Sub-pixel charge map

- From slope to angle

$$\delta\theta_y = \sin^{-1}\left(\frac{dy}{dx}\right) \approx 0,00126 \text{ rad}$$

- Almost no difference