

# BFPLOTS

## Hits-TOT Operation

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Bellow you can find a study of the correlation between Hits and TOT values for run 50 (100 events) and the 4 cases: considering each variable equal or not equal to zero.

### CASE I. $HITS \neq 0, TOT \neq 0$

These are the real values we have in the plots, I show here the mean values.

LAYER	HITS	A_TOT(us)	B_TOT (us)
0Y→L0	1.46	7.725	0
0X→L1	1.37	0	6.162
1X→L2	1.66	6.095	0
1Y→L3	1.94	0	8.434
2Y→L4	1.42	6.39	0
2X→L5	1.47	0	6.374
3X→L6	1.475	5.954	0
3Y→L7	2.03	0	8.135
4Y→L8	1.7	7.834	0
4X→L9	2.11	0	9.597
5X→L10	1.525	6.78	0
5Y→L11	1.46	0	6.974
6Y→L12	1.31	6.494	0
6X→L13	1.34	0	7.89
7X→L14	1.14	6.648	0
7Y→L15	0.5	0	0
8Y→L16	0.9394	5.54	0
8X→L17	1.59	0	10.28
9X→L18	0.66	4.128	0
9Y→L19	0.64	0	3.278
10Y→L20	0.85	3.892	0
10X→L21	1.17	0	6.793
11X→L22	0.66	3.334	0

11Y→L23	0.73	0	3.426
12Y→L24	0.59	3.126	0
12X→L25	0.88	0	2.892

CASE II.  $HITS = 0, TOT = 0$

LAYER	HITS	A_TOT	B_TOT
0Y→L0	0	0	0
0X→L1	0	0	0
1X→L2	0	0	0
1Y→L3	0	0	0
2Y→L4	0	0	0
2X→L5	0	0	0
3X→L6	0	0	0
3Y→L7	0	0	0
4Y→L8	0	0	0
4X→L9	0	0	0
5X→L10	0	0	0
5Y→L11	0	0	0
6Y→L12	0	0	0
6X→L13	0	0	0
7X→L14	0	0	0
7Y→L15	0	0	0
8Y→L16	0	0	0
8X→L17	0	0	0
9X→L18	0	0	0
9Y→L19	0	0	0
10Y→L20	0	0	0
10X→L21	0	0	0
11X→L22	0	0	0
11Y→L23	0	0	0
12Y→L24	0	0	0
12X→L25	0	0	0

CASE III.  $HITS \neq 0, TOT = 0$

LAYER	HITS	A_TOT	B_TOT
0Y→L0	0	0	0
0X→L1	0	0	0
1X→L2	0	0	0
1Y→L3	0	0	0
2Y→L4	0	0	0
2X→L5	0	0	0
3X→L6	0	0	0
3Y→L7	1 (1 hit)	0	0
4Y→L8	0	0	0
4X→L9	1 (1 hit)	0	0
5X→L10	0	0	0
5Y→L11	0	0	0
6Y→L12	0	0	0
6X→L13	0	0	0
7X→L14	0	0	0
7Y→L15	0	0	0
8Y→L16	0	0	0
8X→L17	1 (1 hit)	0	0
9X→L18	0	0	0
9Y→L19	0	0	0
10Y→L20	0	0	0
10X→L21	1 (1 hit)	0	0
11X→L22	0	0	0
11Y→L23	0	0	0
12Y→L24	0	0	0
12X→L25	0	0	0

CASE IV.  $HITS = 0, TOT \neq 0$

LAYER	HITS	A_TOT	B_TOT
0Y→L0	0	28	28
0X→L1	0	30	30
1X→L2	0	28	28
1Y→L3	0	16	16
2Y→L4	0	25	25
2X→L5	0	26	26
3X→L6	0	28	28
3Y→L7	0	18	18
4Y→L8	0	25	25
4X→L9	0	12	12
5X→L10	0	26	26
5Y→L11	0	26	26
6Y→L12	0	31	31
6X→L13	0	30	30
7X→L14	0	37	37
7Y→L15	0	100	100
8Y→L16	0	43	43
8X→L17	0	21	21
9X→L18	0	52	52
9Y→L19	0	58	58
10Y→L20	0	54	54
10X→L21	0	35	35
11X→L22	0	57	57
11Y→L23	0	56	56
12Y→L24	0	61	61
12X→L25	0	51	51

[A\_TOT ≠ 0] = 0

[B\_TOT ≠ 0] = 0

