

TB summary

1 Estimated gains:

- +0.0 Bar, 45K: 1450/1750/2000
- +0.1 Bar, 25K: 1420/1725/2000
- +0.1 Bar, 45K: 1480/1790/2075
- +0.5 Bar, 45K: 1650/2050/-
- +0.5 Bar, 25K: 1590/1965/-
- +1.0 Bar, 45K: 1865/-/-
- +1.0 Bar, 25K: 1795/-/-

2 Summary, from July TB

Description	Pressure	Mu2E	gas gain	N hits 5mm	N hits 10mm	N hits 20mm
Electrons, 30GeV	+0.1		45K		130K	
ToT mode	+0		45K		500K	
Default, gain 45K	+0		45K	6.9M	13.8M	
Default + 1900V(20mm)	+0		45K && 20mm-1900V	250K	500K	1M
Thr 4mV	+0		45K		265K	
Thr 5mV	+0		45K		300K	
Thr 6mV	+0		45K		500K	
Thr 7mV	+0		45K		<u>60K</u>	
Thr 8mV	+0		45K		<u>70K</u>	
Thr 9mV	+0		45K		100K	
Thr 10mV	+0		45K		200K	
Thr 12mV	+0		45K		280K	
Thr 13mV	+0		45K		290K	
Thr 15mV	+0		45K		290K	
Thr 17mV	+0		45K		350K	
Mu2E#2, ~12mV thr	+0	Mu2E#2, 1mV/fC, peak 25ns	45K && 20mm-1900V		3.8M	
Mu2E#2, ~34mV thr	+0	Mu2E#2, 1mV/fC, peak	45K && 20mm-1900V		500K	

Description	Pressure	Mu2E	gas gain	N hits 5mm	N hits 10mm	N hits 20mm
Mu2E#2, <u>-8mV</u> thr	+0	25ns Mu2E#2, 3mV/fC, peak 25ns	45K		2.7M	
Mu2E#3, ~5mV thr	+0	Mu2E#3, 3mV/fC, peak 25ns	45K		2.7M	
Mu2E#3, ~7mV thr	+0	Mu2E#3, 3mV/fC, peak 25ns	45K		150K	
Mu2E#3, ~10mV thr	+0	Mu2E#3, 3mV/fC, peak 25ns	45K		160K	
Mu2E#3, ~15mV thr	+0	Mu2E#3, 3mV/fC, peak 25ns	45K		140K	
Default, gain 45K	+0.1		45K		2.7M	
Default, gain 25K	+0.1		25K		150K	
HV scan	+0.1		4 points between 25 and 45		~200K each	
Thr 4mV	+0.1		45K		190K	
Thr 6mV	+0.1		45K		380K	
Thr 8mV	+0.1		45K		150K	
Thr 10mV	+0.1		45K		150K	
Thr 13mV	+0.1		45K		150K	
Thr 17mV	+0.1		45K		190K	
Thr 4mV	+0.1		25K		190K	
Thr 6mV	+0.1		25K		230K	
Thr 8mV	+0.1		25K		160K	
Thr 10mV	+0.1		25K		120K	
Thr 13mV	+0.1		25K		110K	
Thr 17mV	+0.1		25K		260K	
0.5mV/fC, 25ns, thr 5mV	+0.1	Mu2E#3, 0.5mV/fC, peak 25ns	45K		320K	

Description	Pressure	Mu2E	gas gain	N hits 5mm	N hits 10mm	N hits 20mm
0.5mV/fC, 200ns, thr 5mV	+0.1	Mu2E#3, 0.5mV/fC, peak 200ns	45K		2.2M	
0.5mV/fC, 200ns, thr 5mV	+0.1	Mu2E#3, 0.5mV/fC, peak 200ns	25K		200K	
0.5mV/fC, 200ns, thr 5mV, HV scan	+0.1	Mu2E#3, 0.5mV/fC, peak 200ns	4 points between 25 and 45		150-200K	
1.0mV/fC, 25ns, thr 5mV	+0.1	Mu2E#3, 1.0mV/fC, peak 25ns	45K		230K	
3.0mV/fC, 25ns, thr 5mV	+0.1	Mu2E#3, 3.0mV/fC, peak 25ns	1500/1800/2050		140K	
3.0mV/fC, 25ns, thr 5mV	+0.1	Mu2E#3, 3.0mV/fC, peak 25ns	45K		2.6M	
3.0mV/fC, 25ns, thr 4mV	+0.1	Mu2E#3, 3.0mV/fC, peak 25ns	45K		130K	
3.0mV/fC, 25ns, thr 6mV	+0.1	Mu2E#3, 3.0mV/fC, peak 25ns	45K		110K	
3.0mV/fC, 25ns, thr 7mV	+0.1	Mu2E#3, 3.0mV/fC, peak 25ns	45K		130K	
3.0mV/fC, 25ns, thr 8mV	+0.1	Mu2E#3, 3.0mV/fC, peak 25ns	45K		140K	
3.0mV/fC, 25ns, thr 9mV	+0.1	Mu2E#3, 3.0mV/fC, peak 25ns	45K		140K	
3.0mV/fC, 25ns, thr 10mV	+0.1	Mu2E#3, 3.0mV/fC, peak 25ns	45K		110K	
3.0mV/fC, 25ns, thr 15mV	+0.1	Mu2E#3, 3.0mV/fC, peak 25ns	45K		97K	

Description	Pressure	Mu2E	gas gain	N hits 5mm	N hits 10mm	N hits 20mm
3.0mV/fC, 25ns, thr 17mV	+0.1	Mu2E#3, 3.0mV/fC, peak 25ns	45K		150K	
3.0mV/fC, 25ns, thr 5mV	+0.1	Mu2E#3, 3.0mV/fC, peak 25ns	25K		260K	
0.5mV/fC, 200ns, thr 5mV	+0.5	Mu2E#3, 0.5mV/fC, peak 200ns	45K		86K	-
0.5mV/fC, 200ns, thr 5mV	+0.5	Mu2E#3, 0.5mV/fC, peak 200ns	25K		58K	-
3.0mV/fC, 25ns, thr 5mV	+0.5	Mu2E#3, 3.0mV/fC, peak 25ns	45K		360K	-
3.0mV/fC, 25ns, thr 5mV	+0.5	Mu2E#3, 3.0mV/fC, peak 25ns	25K		150K	-
3.0mV/fC, 25ns, thr 5mV	~+0.6	Mu2E#3, 3.0mV/fC, peak 25ns	1800	(- tripped)	-	-
3.0mV/fC, 25ns, thr 5mV	~+0.6	Mu2E#3, 3.0mV/fC, peak 25ns	1650	81K	-	-
0.5mV/fC, 200ns, thr 5mV	+1.0	Mu2E#3, 0.5mV/fC, peak 200ns	45K	90K	-	-
0.5mV/fC, 200ns, thr 5mV	+1.0	Mu2E#3, 0.5mV/fC, peak 200ns	25K	60K	-	-
3.0mV/fC, 25ns, thr 5mV	+1.0	Mu2E#3, 3.0mV/fC, peak 25ns	45K	100K	-	-
3.0mV/fC, 25ns, thr 5mV	+1.0	Mu2E#3, 3.0mV/fC, peak 25ns	25K	90K	-	-
Rotated setup, thr 5mV	+0.1	Mu2E#3, 3mV/fC, peak 25ns	25K		250K	

Description	Pressure	Mu2E	gas gain	N hits 5mm	N hits 10mm	N hits 20mm
Rotated setup, thr 5mV	+0.1	Mu2E#3, 0.5mV/fC, peak 200ns	25K		140K	
Rotated setup, thr 5mV	+0.1	Mu2E#3, 3mV/fC, peak 25ns	45K		250K	
Rotated setup, thr 5mV	+0.1	Mu2E#3, 0.5mV/fC, peak 200ns	45K		150K	

3 Summary:

1. TIGER only: thr scans on +0 and +0.1 Bar.
2. TIGER only: a lot (x130 of necessary) data on 45K gas gain
3. TIGER only, +0.1 Bar: HV scan, a lot of data on 45K gas gain
4. TIGER & Mu2E#2: data on +0 Bar, 45K gas gain. Need to understand thresholds
5. TIGER & Mu2E#2, +0Bar, 3mv/fC & 25ns: small thr scan (4 points) for 45K gain, many data for 45K gain & 5mV thr
6. TIGER & Mu2E#2, +0.1Bar, 3mv/fC & 25ns: thr scan for 45K gain
7. TIGER & Mu2E#2, +0.1Bar, 0.5mv/fC & 200ns: HV scan