

UPDATE

Probing Scaling Properties of the Underlying Event in pp Collisions from $\sqrt{s} = 0.9$ to 13 TeV

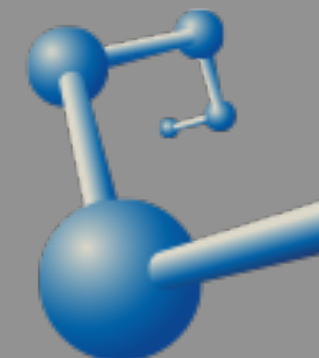
Feng Fan (CCNU)

with Antonio Ortiz Velásquez and Daicui Zhou

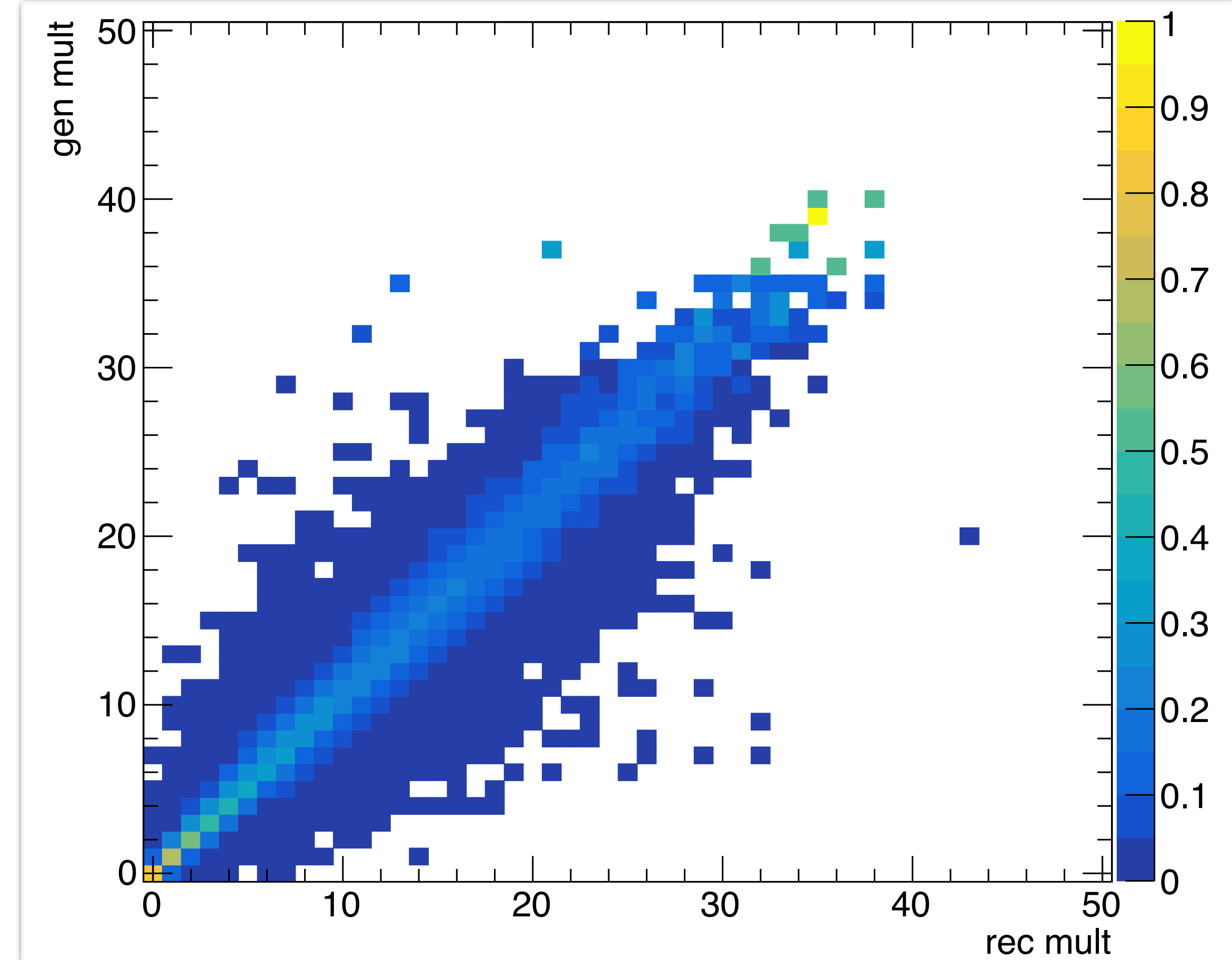
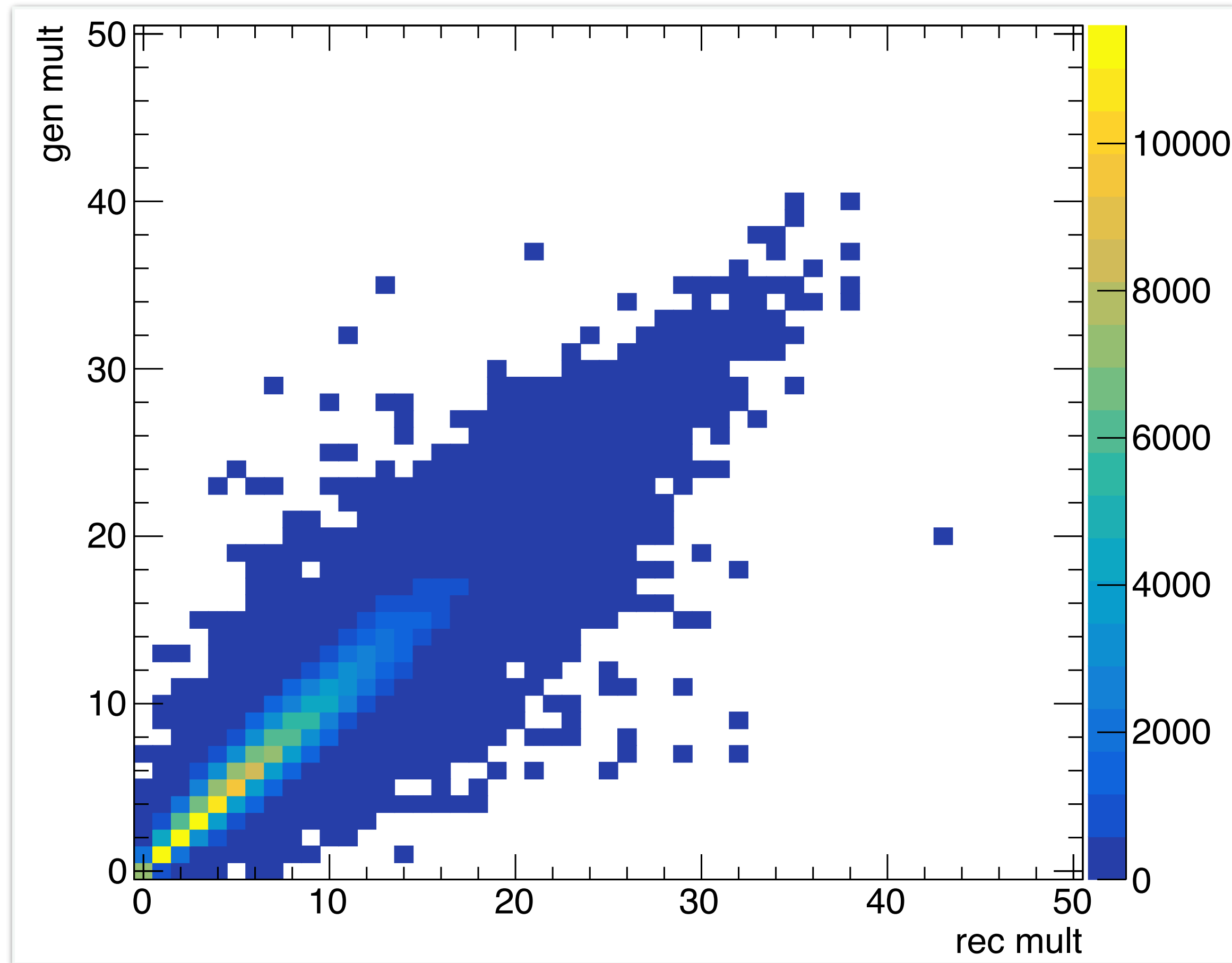


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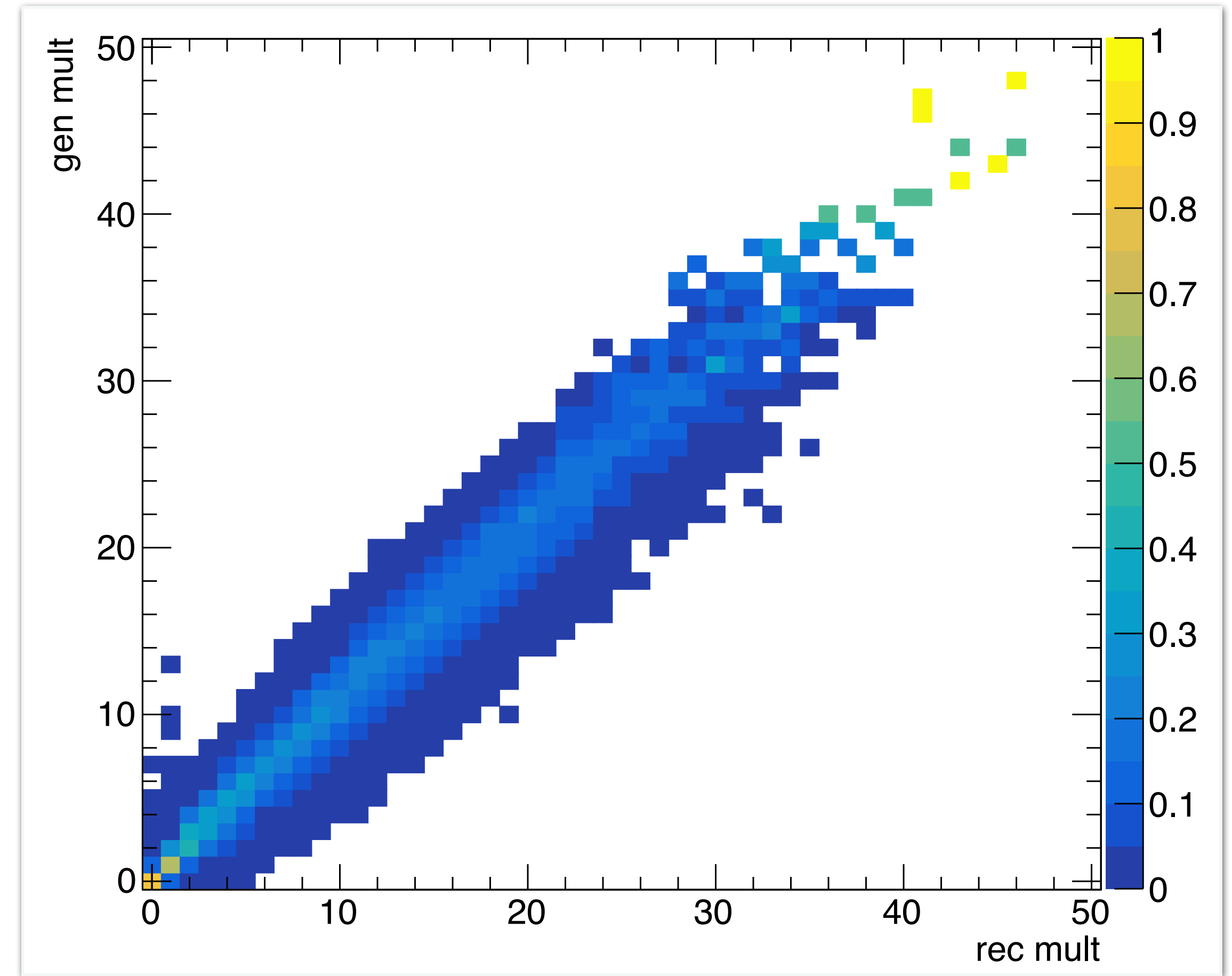
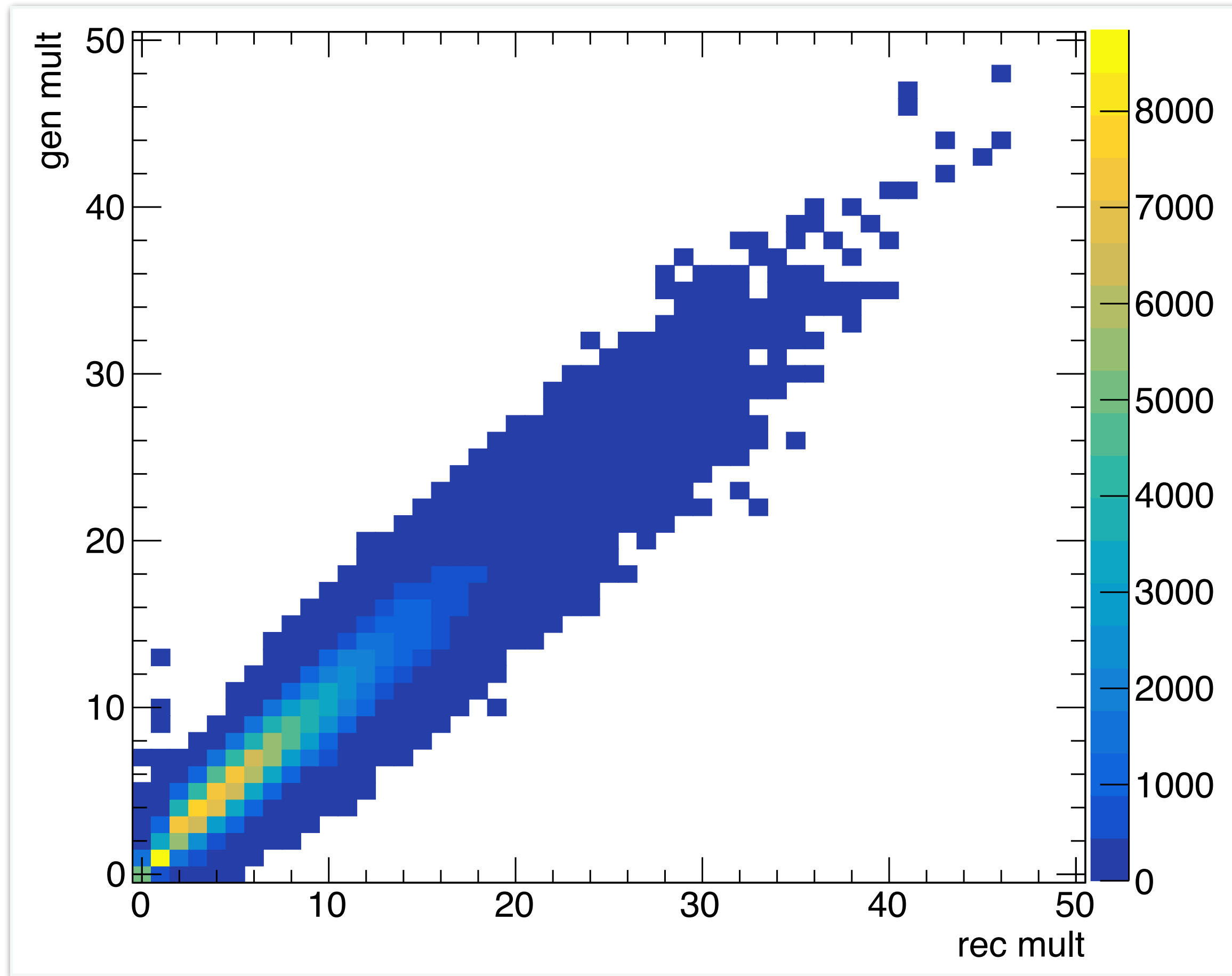
Instituto de Ciencias Nucleares UNAM



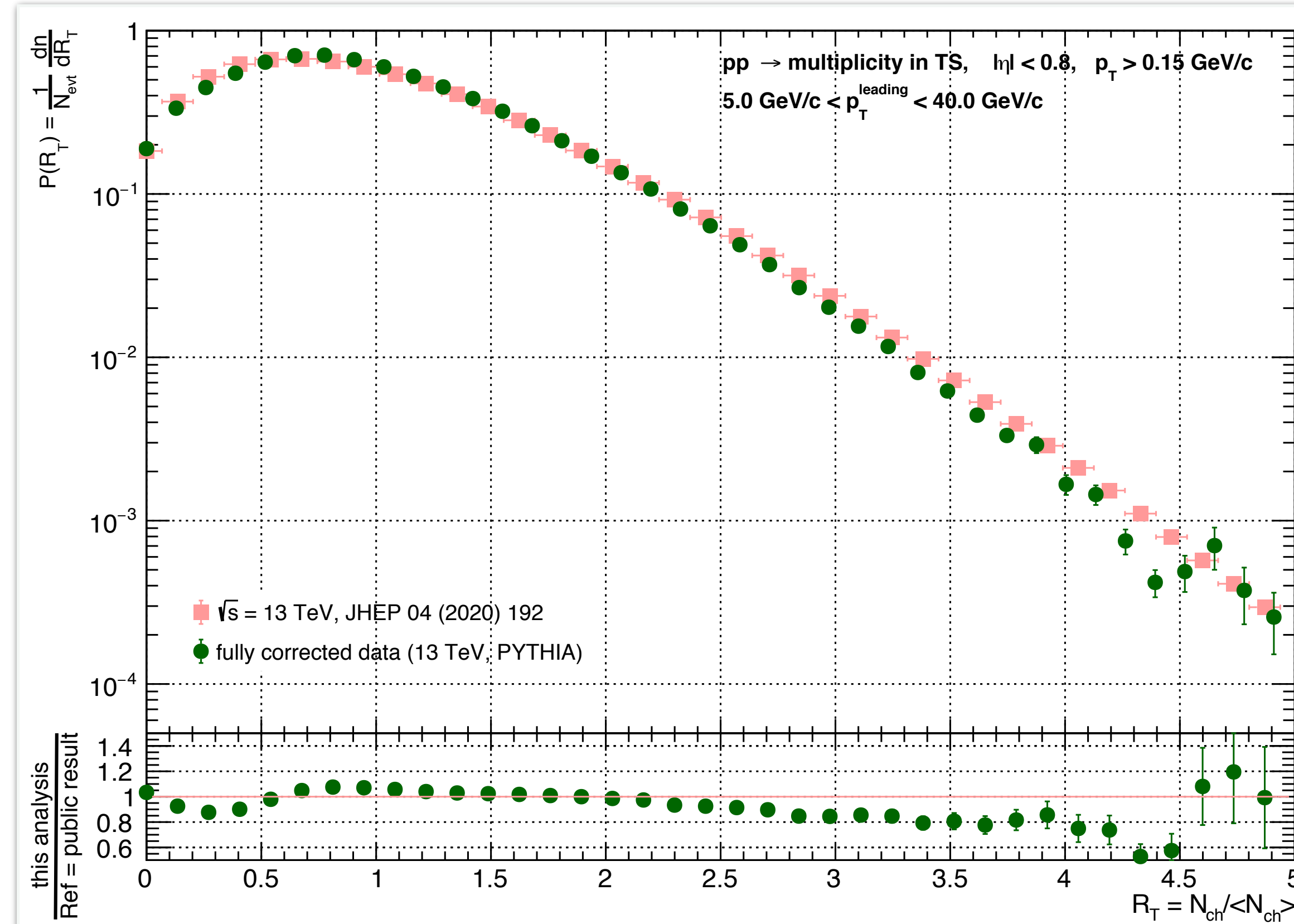
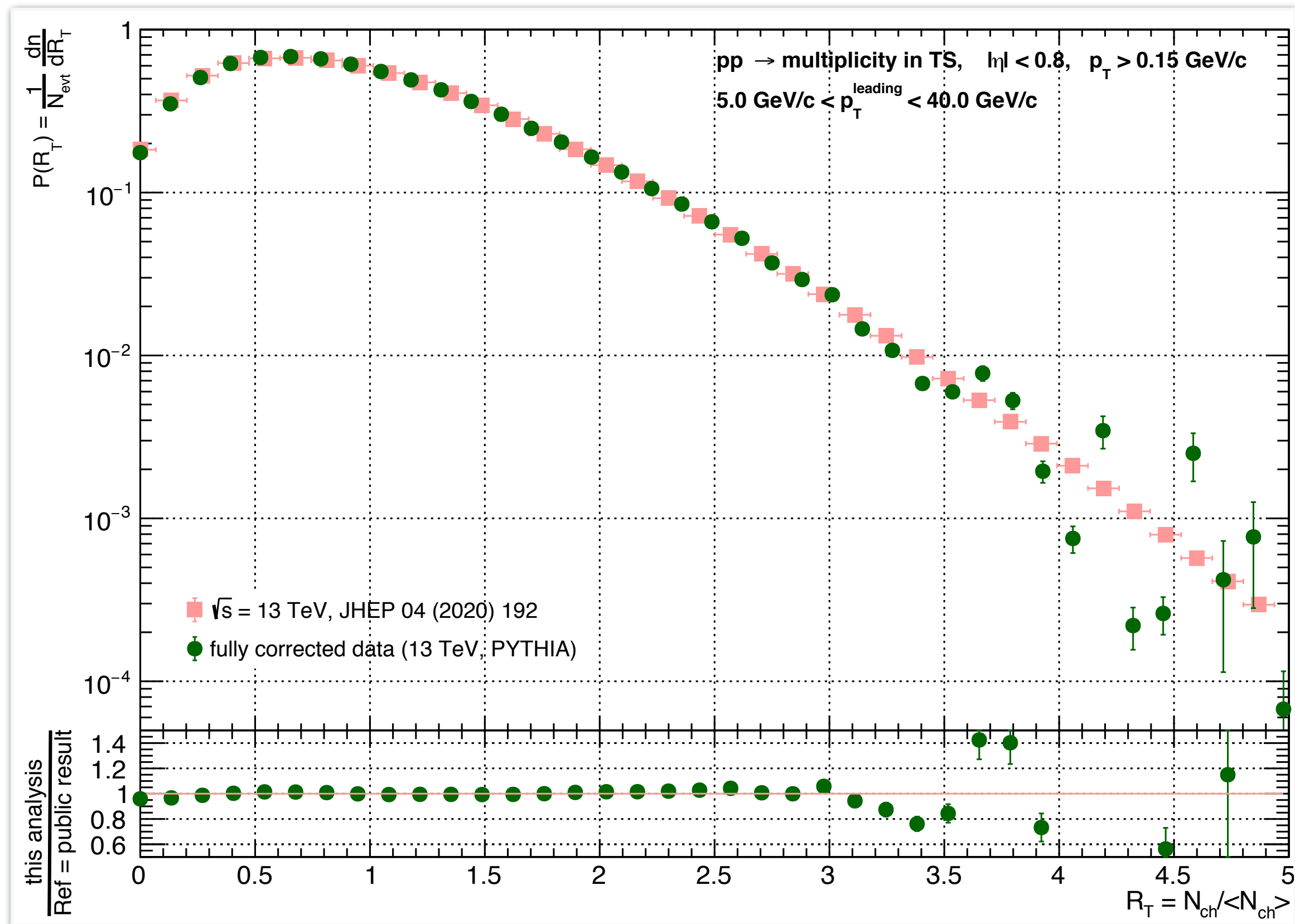
Response Matrix without Extrapolate (pp, 13TeV)



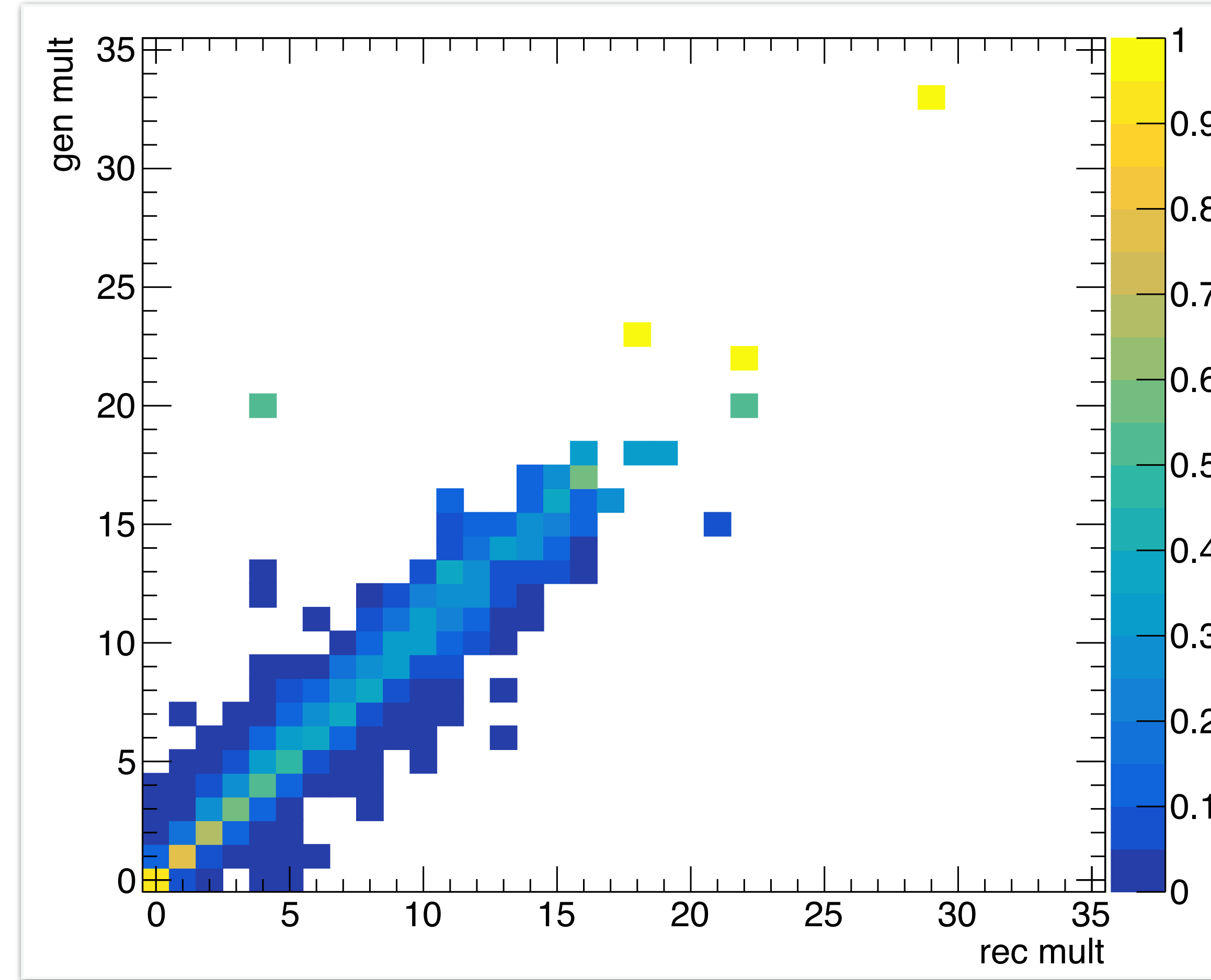
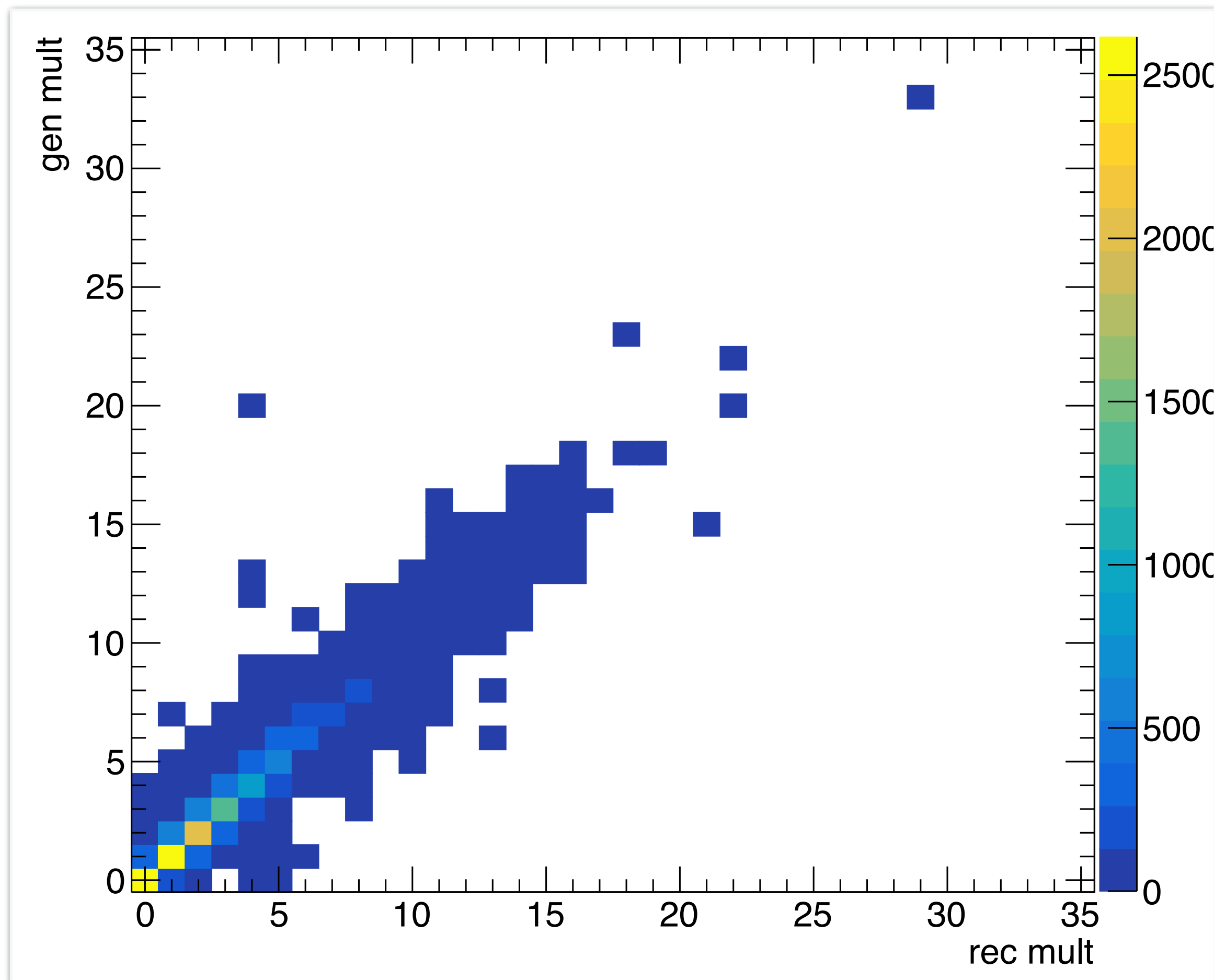
Response Matrix Extrapolate (pp, 13TeV)



Cross Check for R_T (pp, 13TeV)

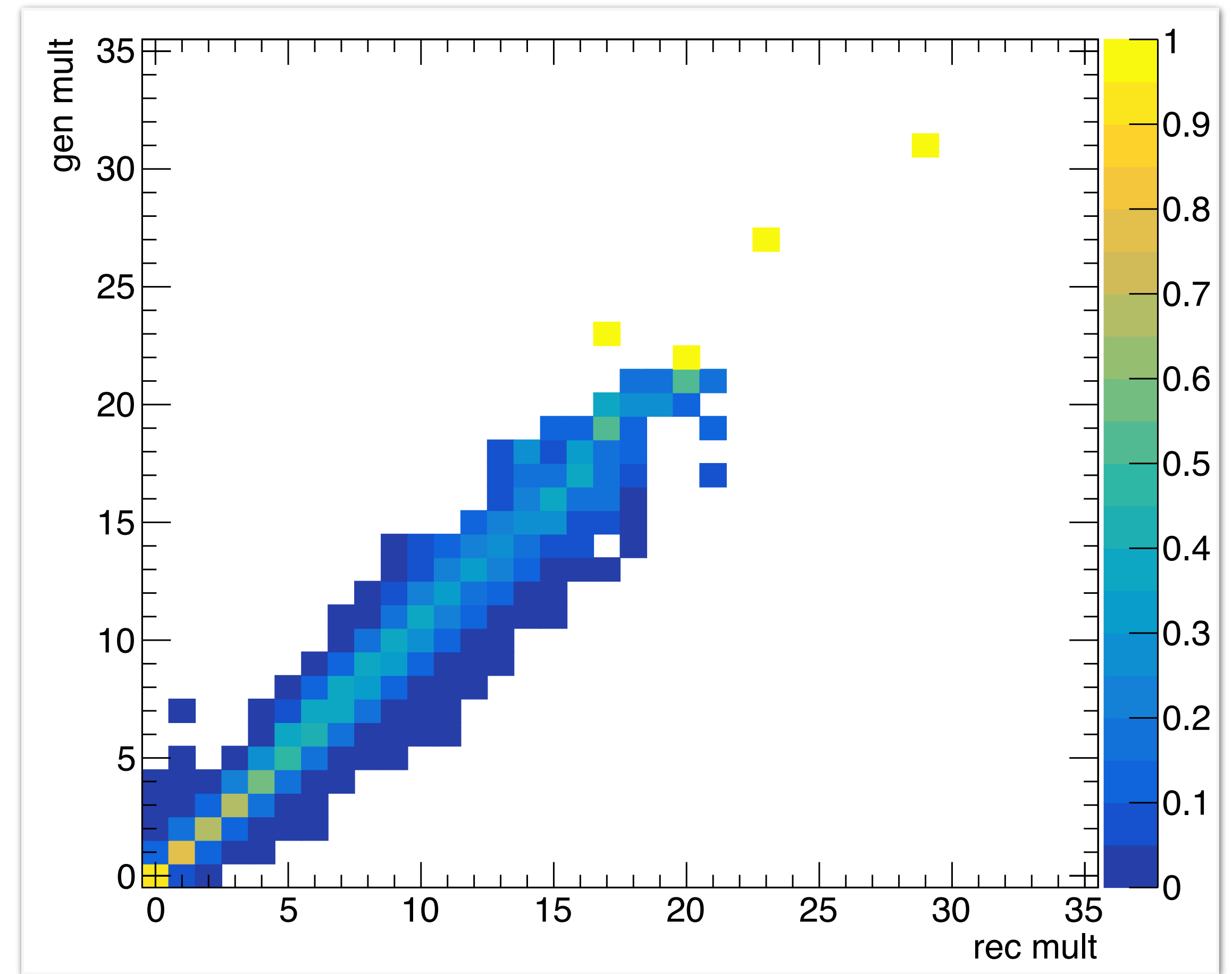
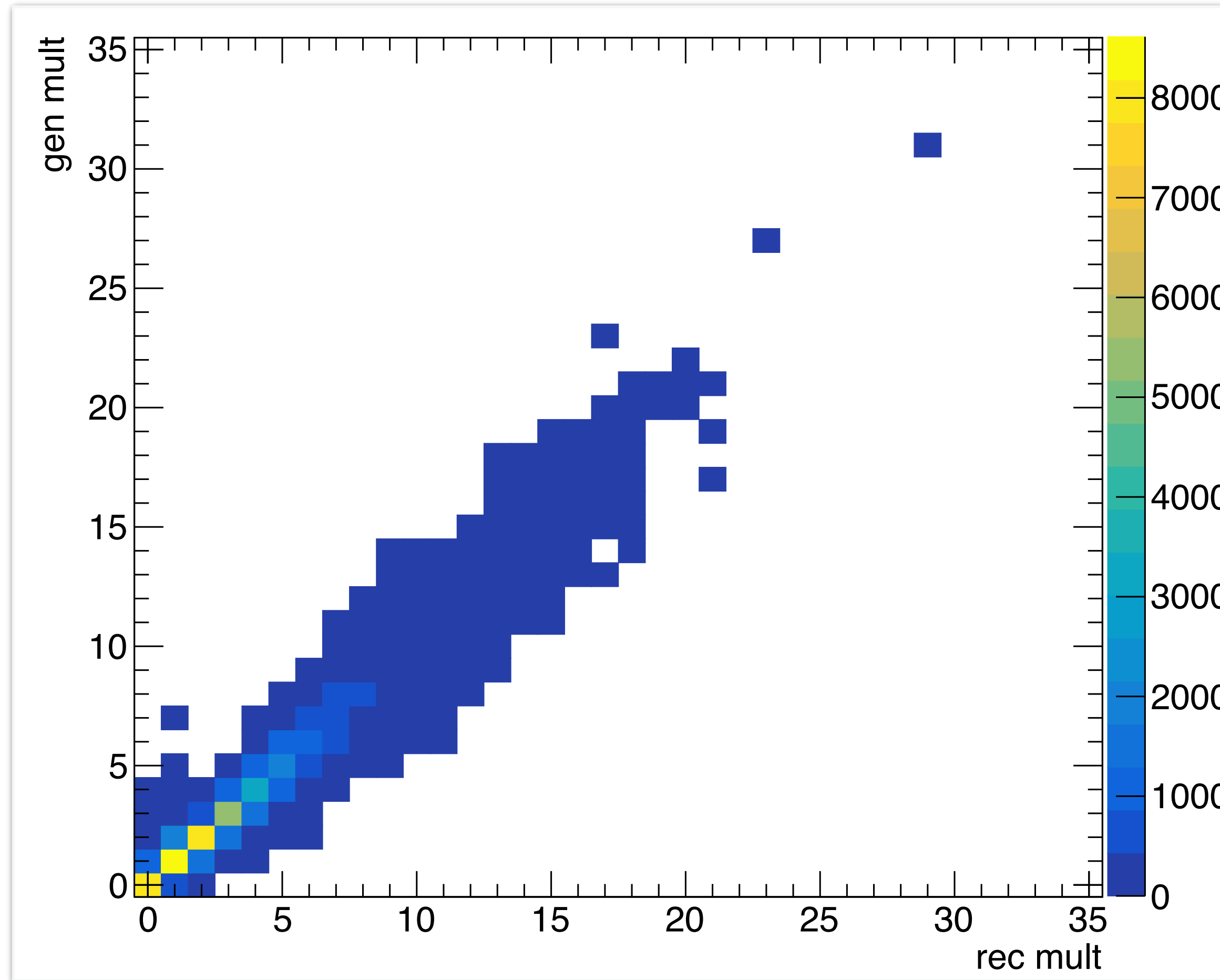


Response Matrix without Extrapolate (pp, 5TeV)



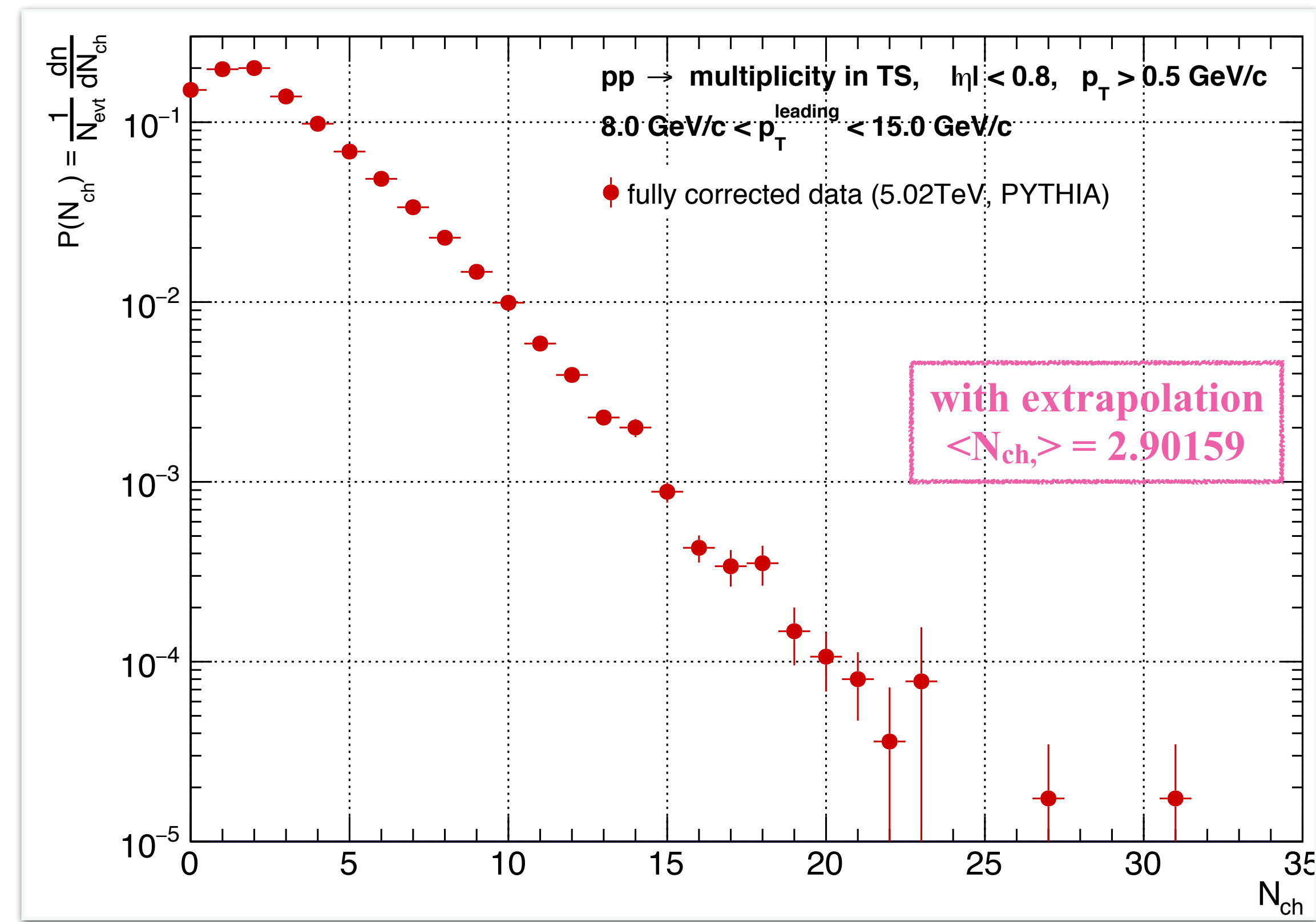
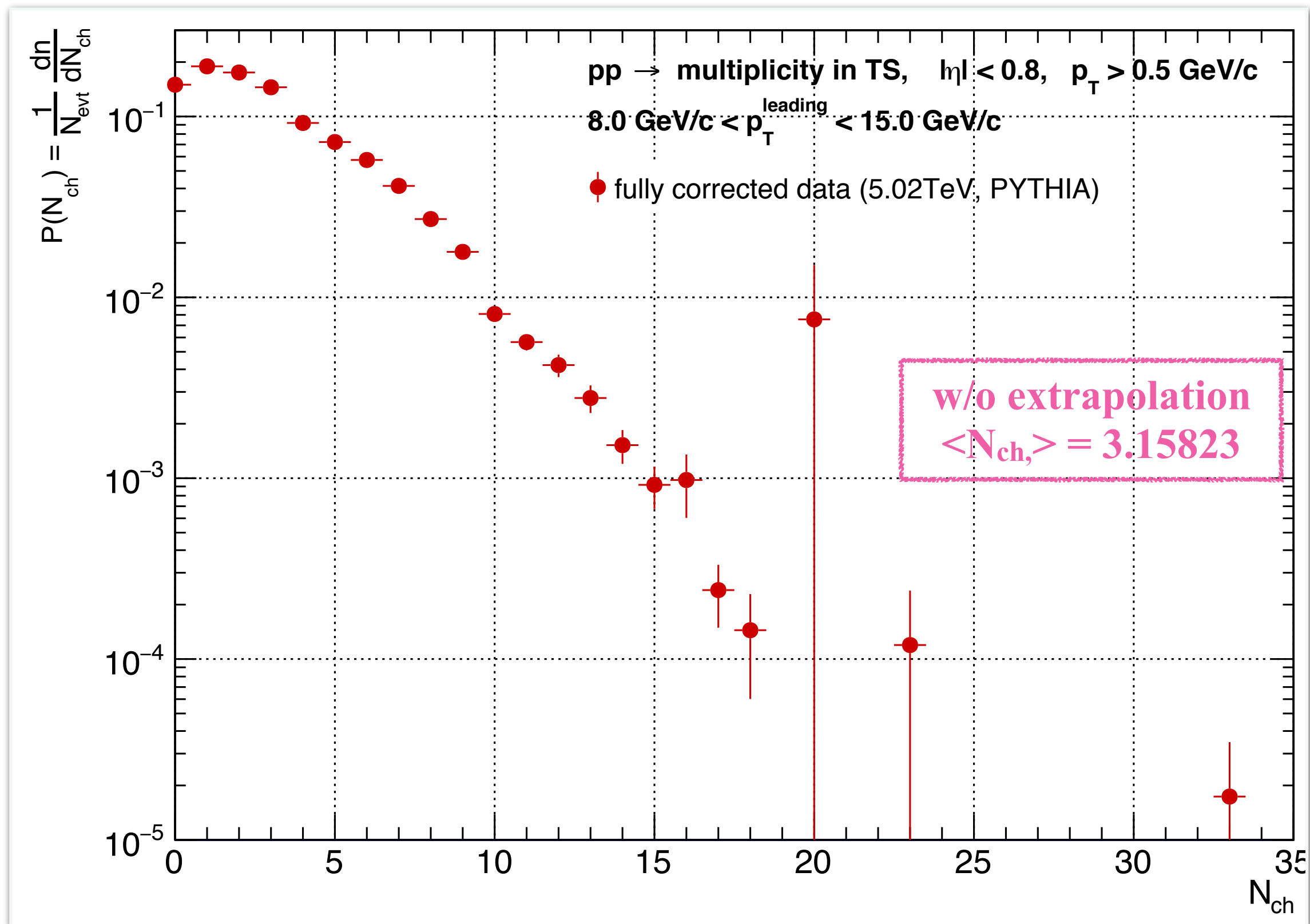
$|\eta| < 0.8, p_T > 0.5 \text{ GeV}/c, 8 \text{ GeV}/c < p_T^{\text{leading}} < 15 \text{ GeV}/c$

Response Matrix Extrapolate (pp, 5TeV)



$|\eta| < 0.8, p_T > 0.5 \text{ GeV}/c, 8 \text{ GeV}/c < p_T^{\text{leading}} < 15 \text{ GeV}/c$

Cross Check for Multiplicity in TS (pp, 5.02TeV)



percentile (%)	pp	p-Pb	Pb-Pb
0-100	2.85481 ± 0.09992	7.77131 ± 0.31085	276.517 ± 17.974
0-5	4.40116 ± 0.15404	13.3747 ± 0.53500	542.218 ± 35.244
5-10	3.48419 ± 0.12195	10.6038 ± 0.42415	441.042 ± 28.668
10-20	2.8299 ± 0.09905	8.9939 ± 0.35976	331.325 ± 21.536
20-40	2.11506 ± 0.07402	7.05158 ± 0.28206	186.956 ± 12.152
40-60	1.66618 ± 0.05831	4.99572 ± 0.19983	71.642 ± 4.657
60-90	1.27512 ± 0.04463	3.20406 ± 0.12816	19.413 ± 1.262

- With the same kinematic cuts comparing the mean value of multiplicity of UE between this work and the Sushanta's result [*ANA-1092*].