

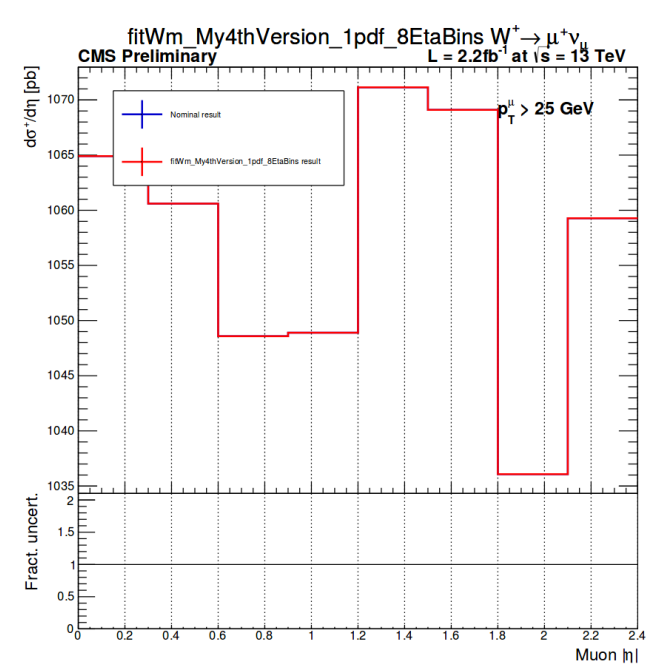
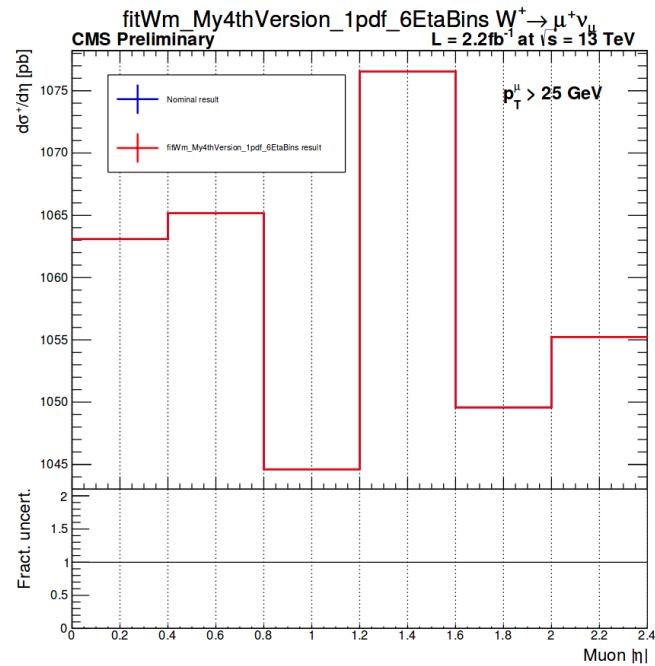
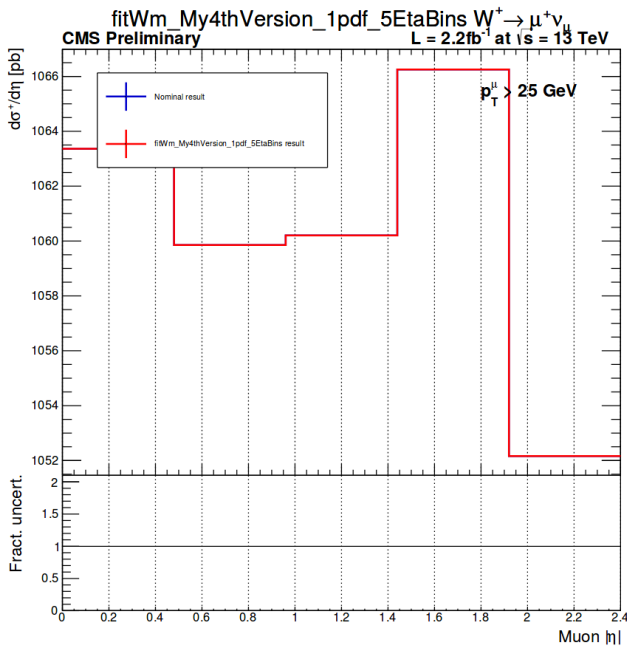
W asymmetry studies update: Systematics

26.02.2019

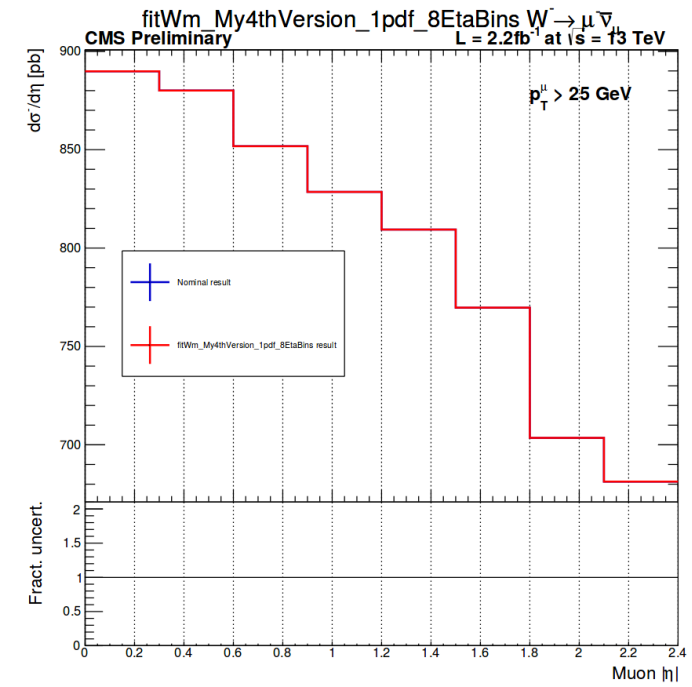
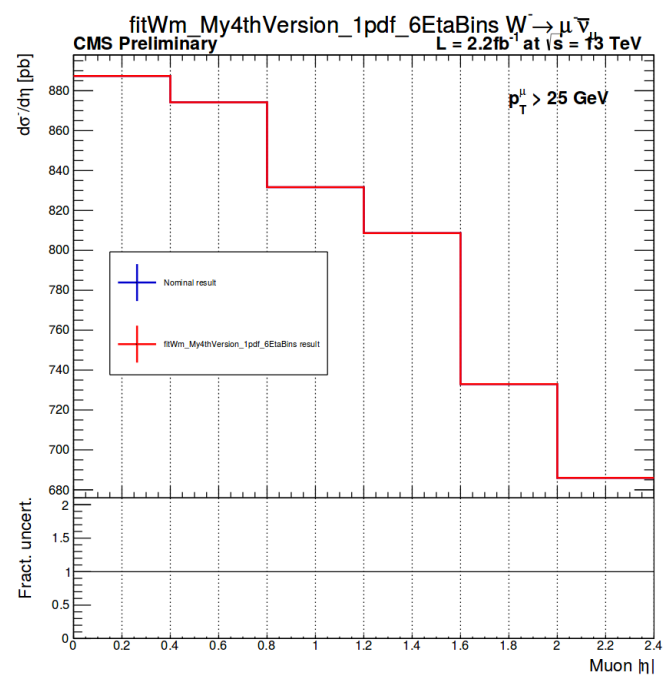
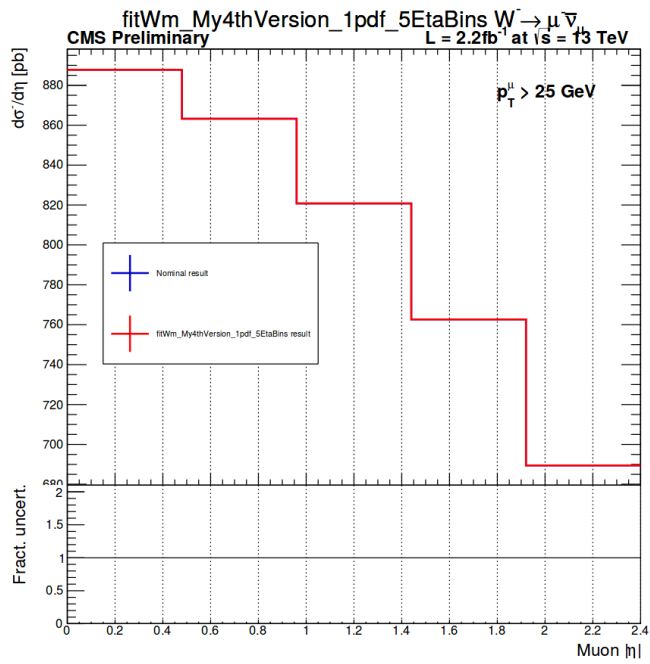
Results

- Acceptance calculation for different eta binning – done.
- x-section and asymmetry for different eta bins – done.
- different efficiency schemes – done.
- x-section and asymmetry for different eff. schemes – done
- Cristal Ball systematics – in process.

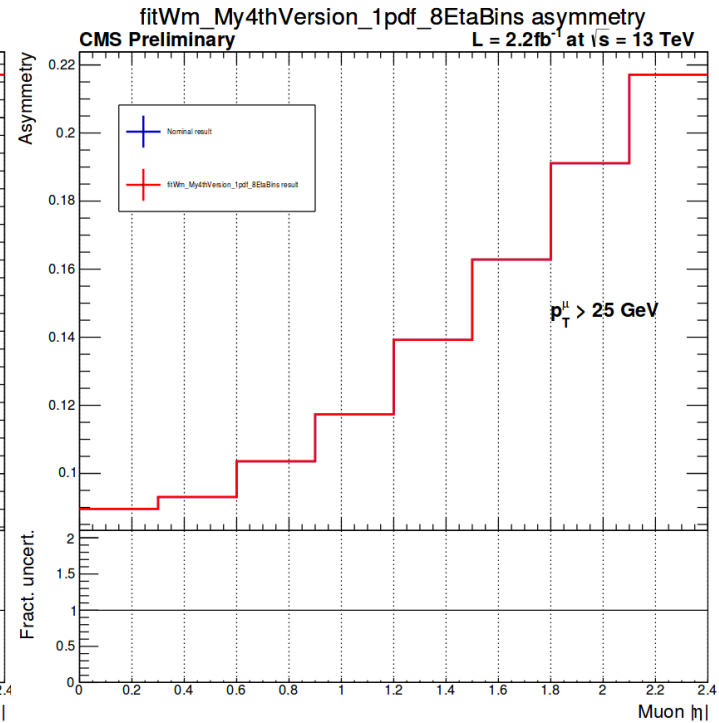
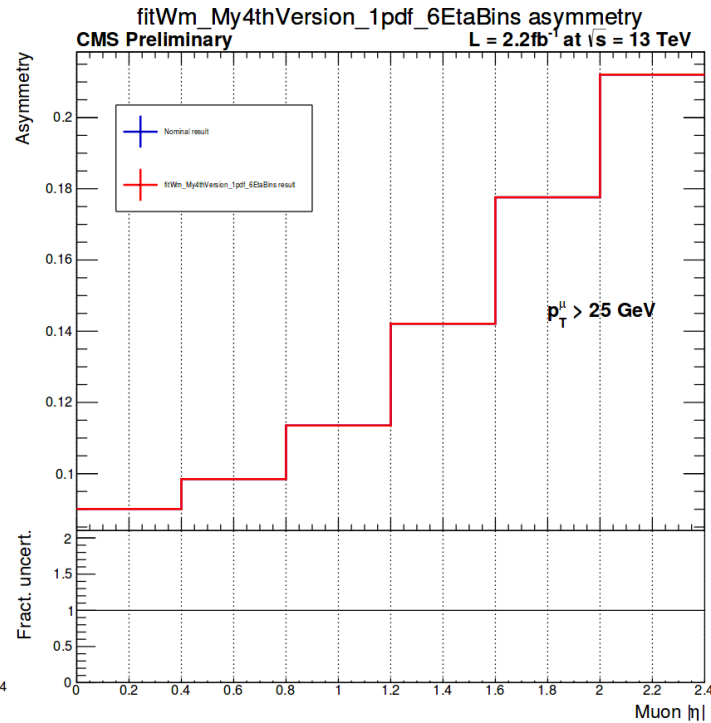
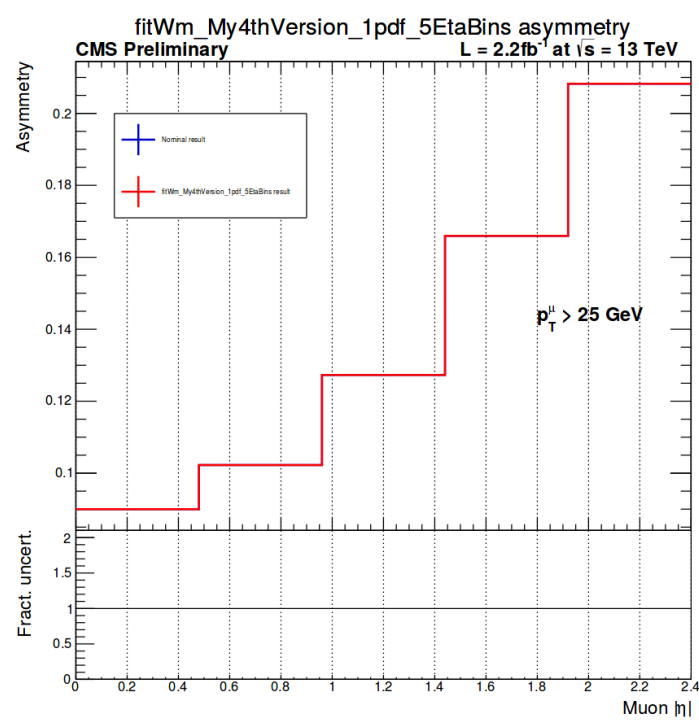
W+ xsection for different eta bins



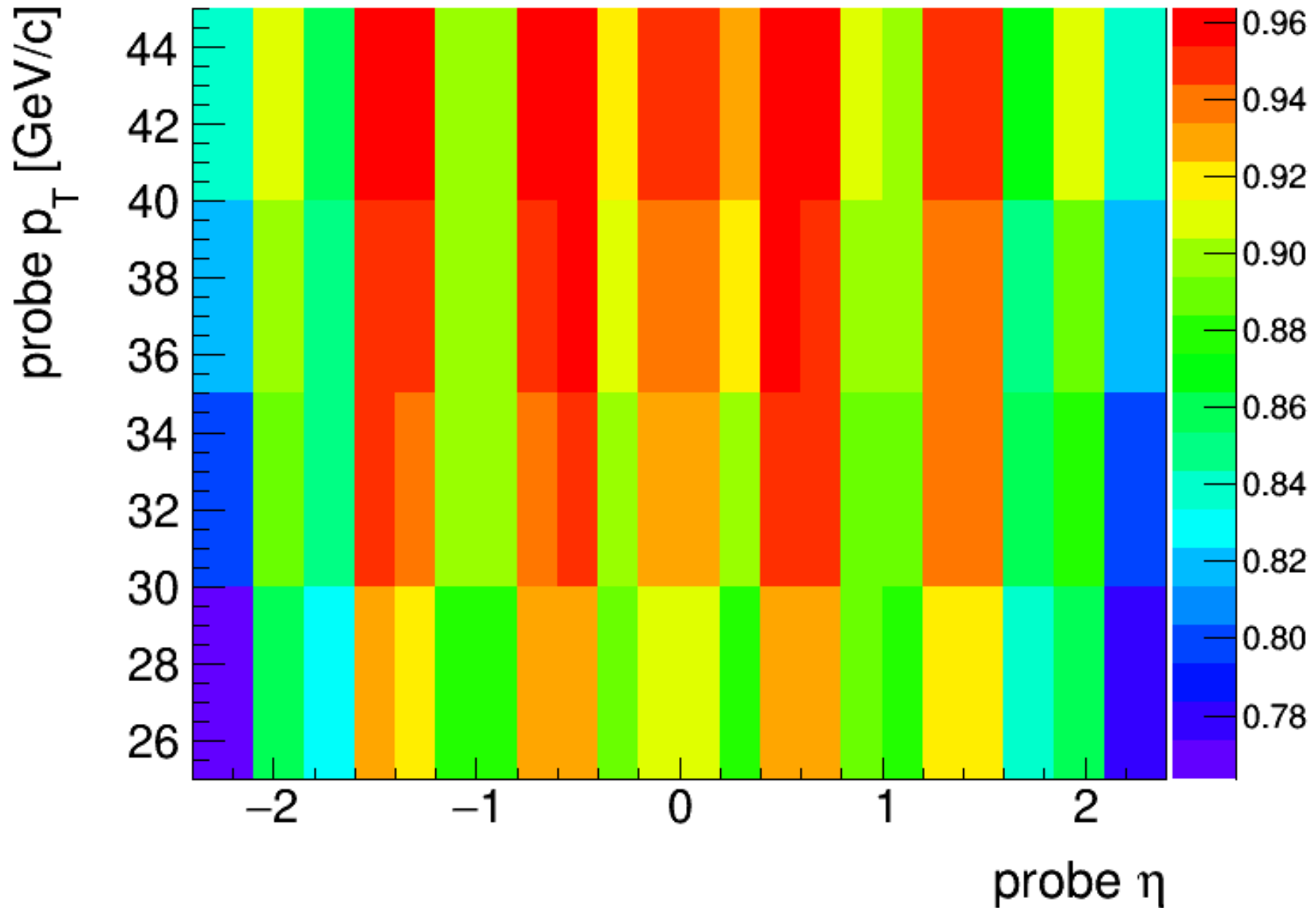
W- xsection for different eta bins



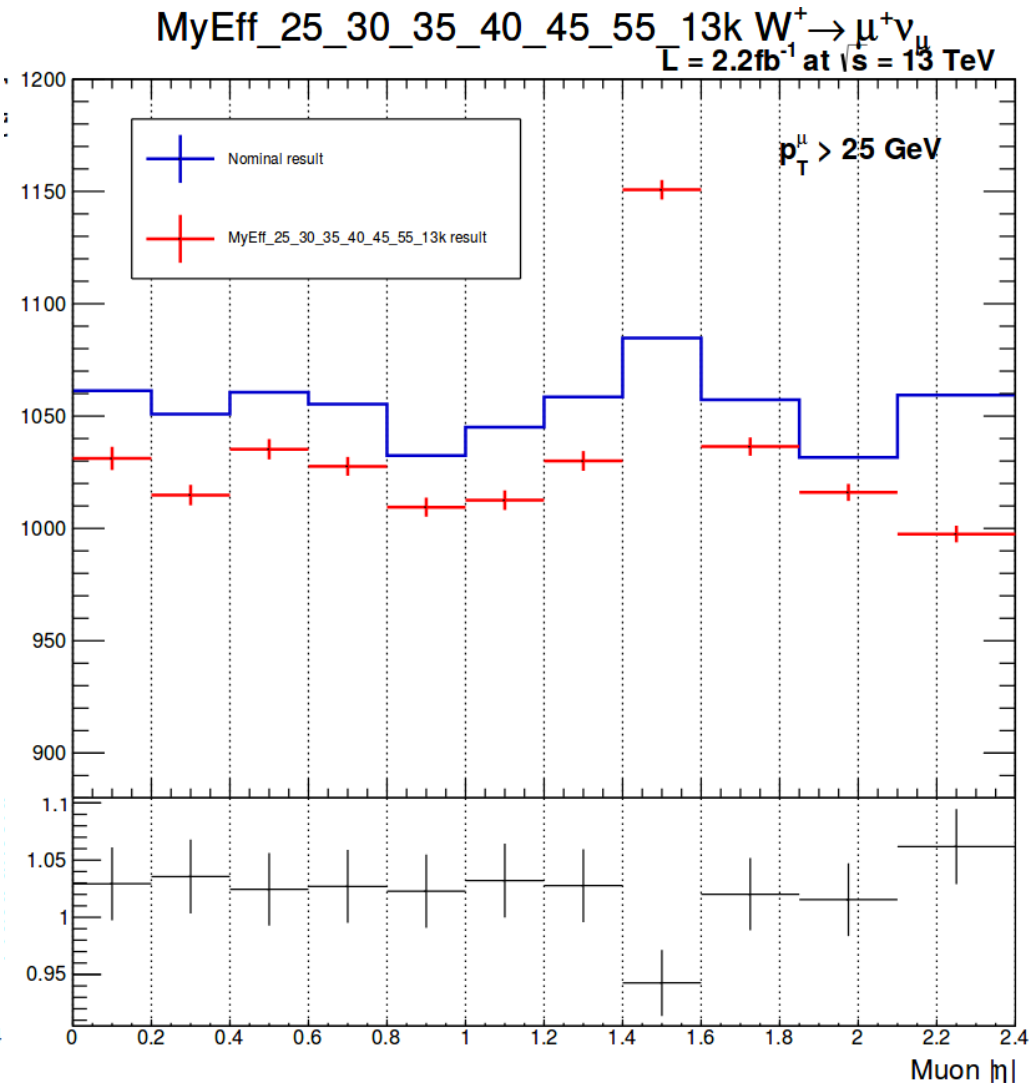
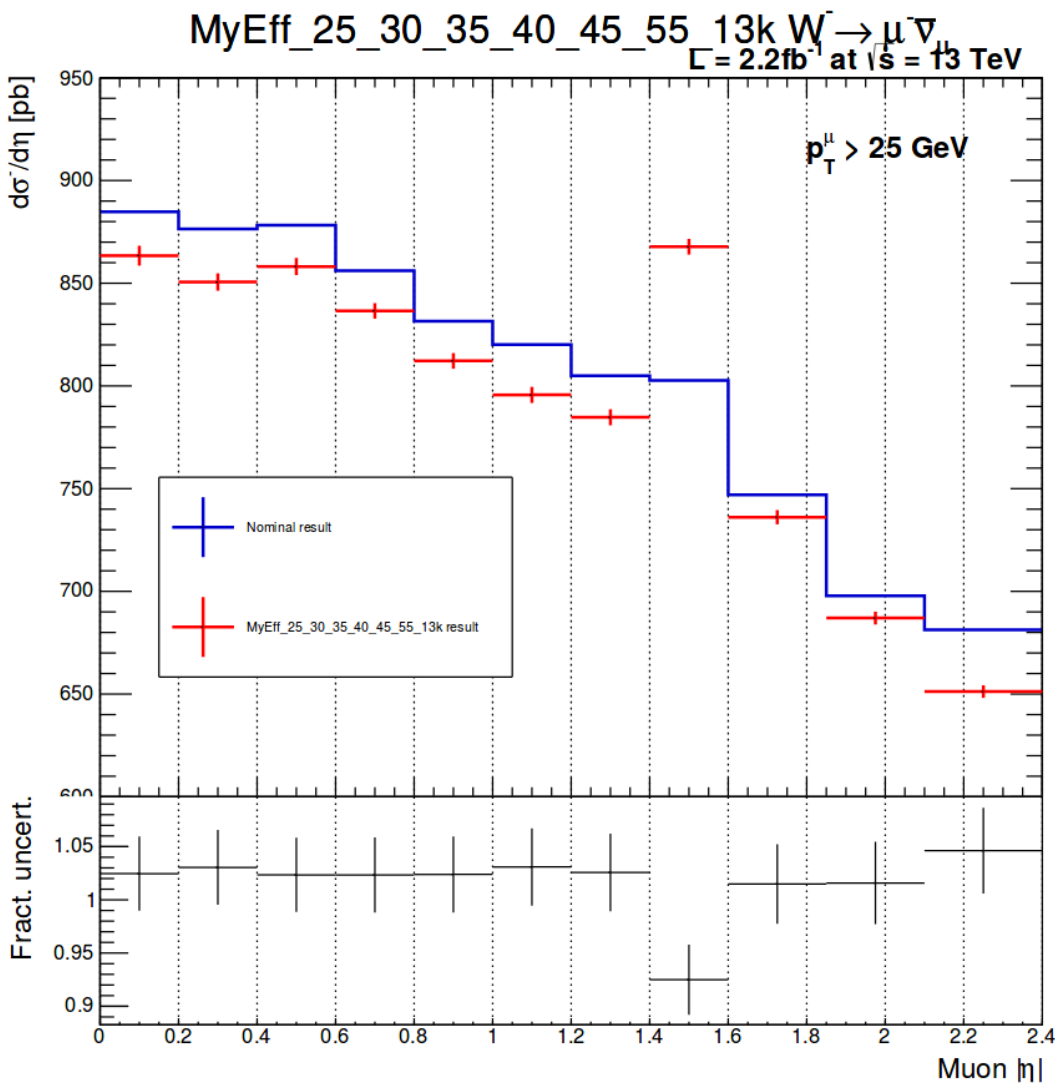
W asymmetry for different eta bins



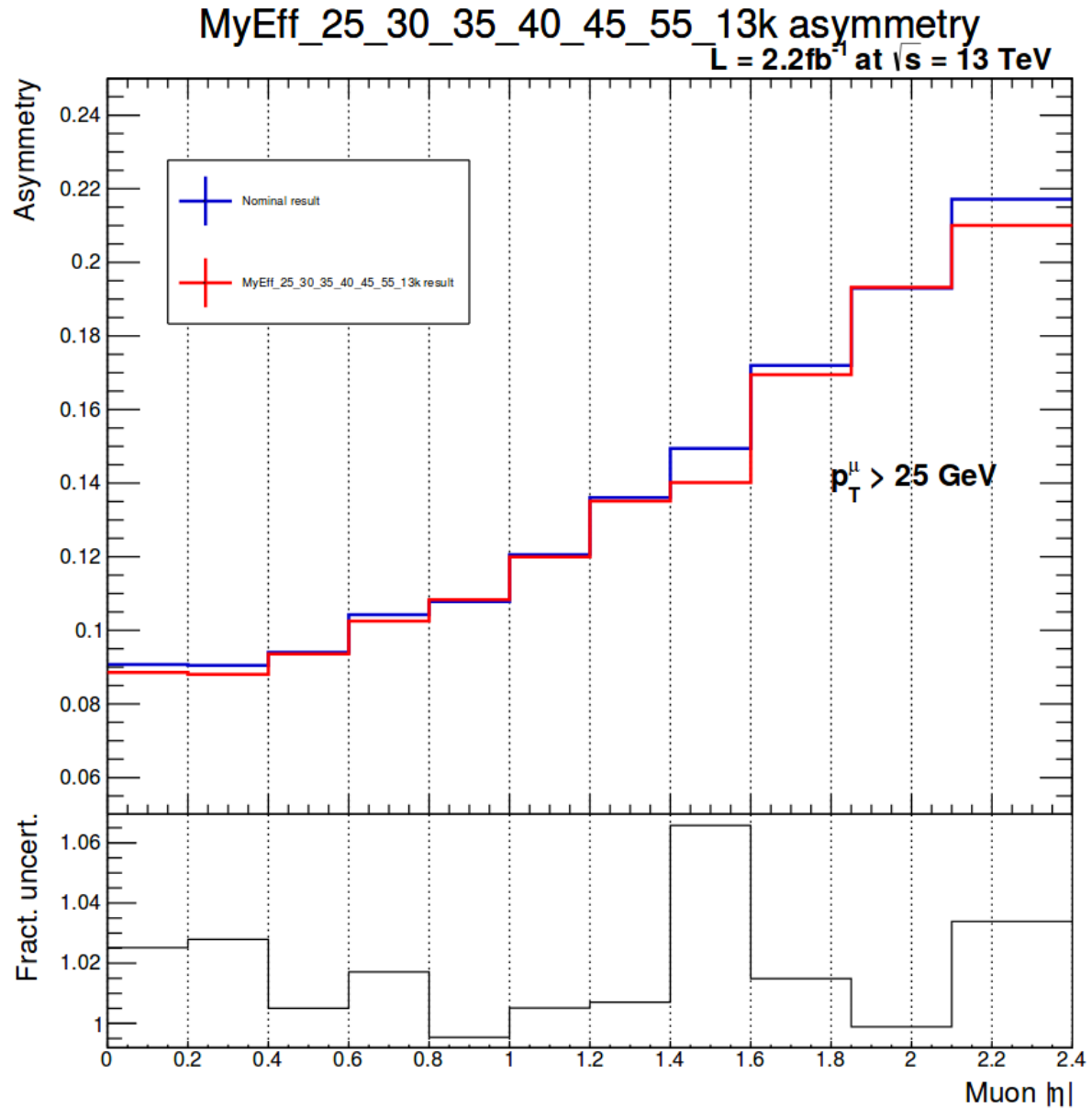
Efficiency(MuHLT neg) for asymmetry eta, pt:25-30-35-40-45-55-13k



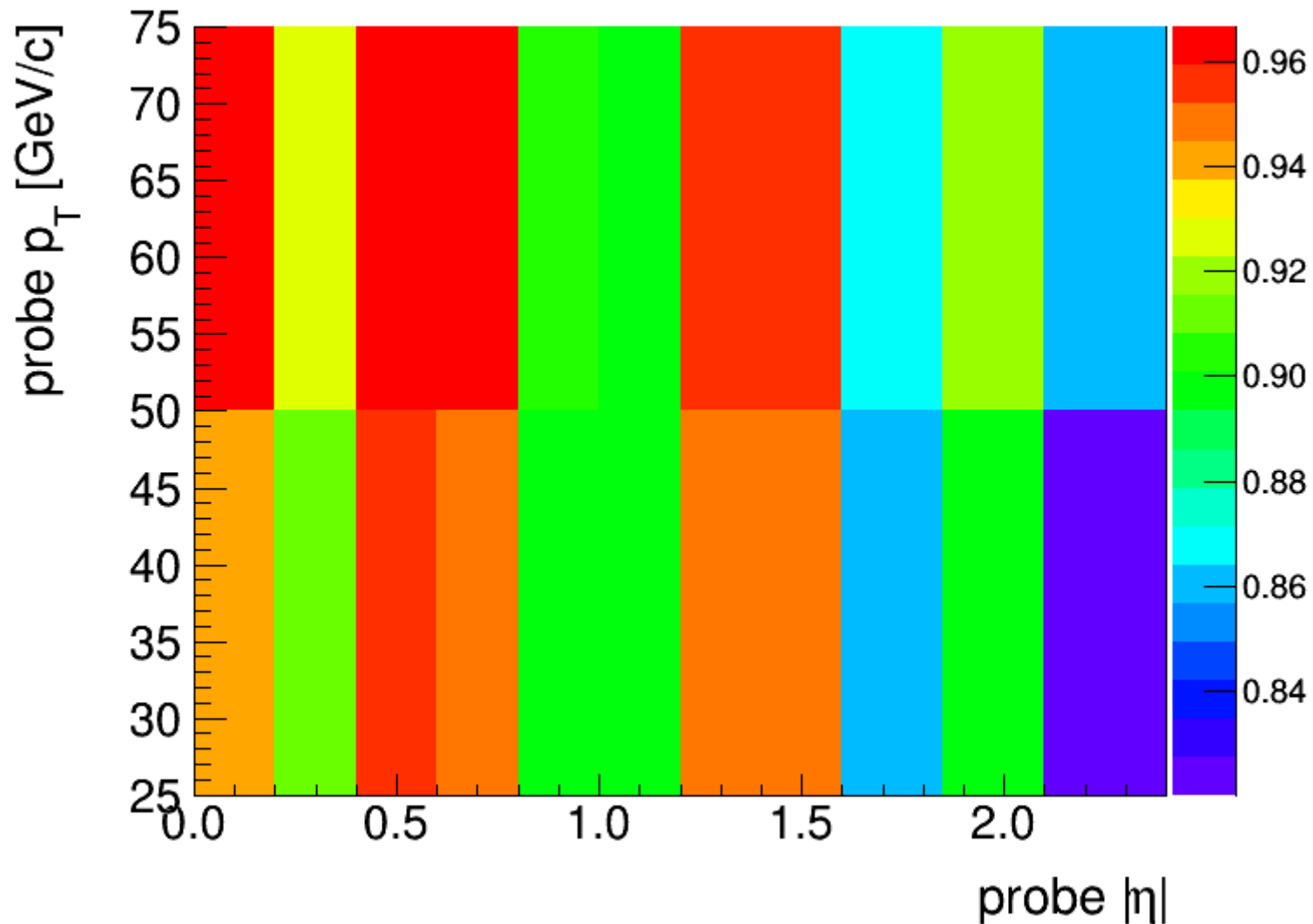
W xsection for asymmetry eta, pt:25-30-35-40-45-55-13k



Asymmetry for asymmetry eta, pt:25-30-35-40-45-55-13k

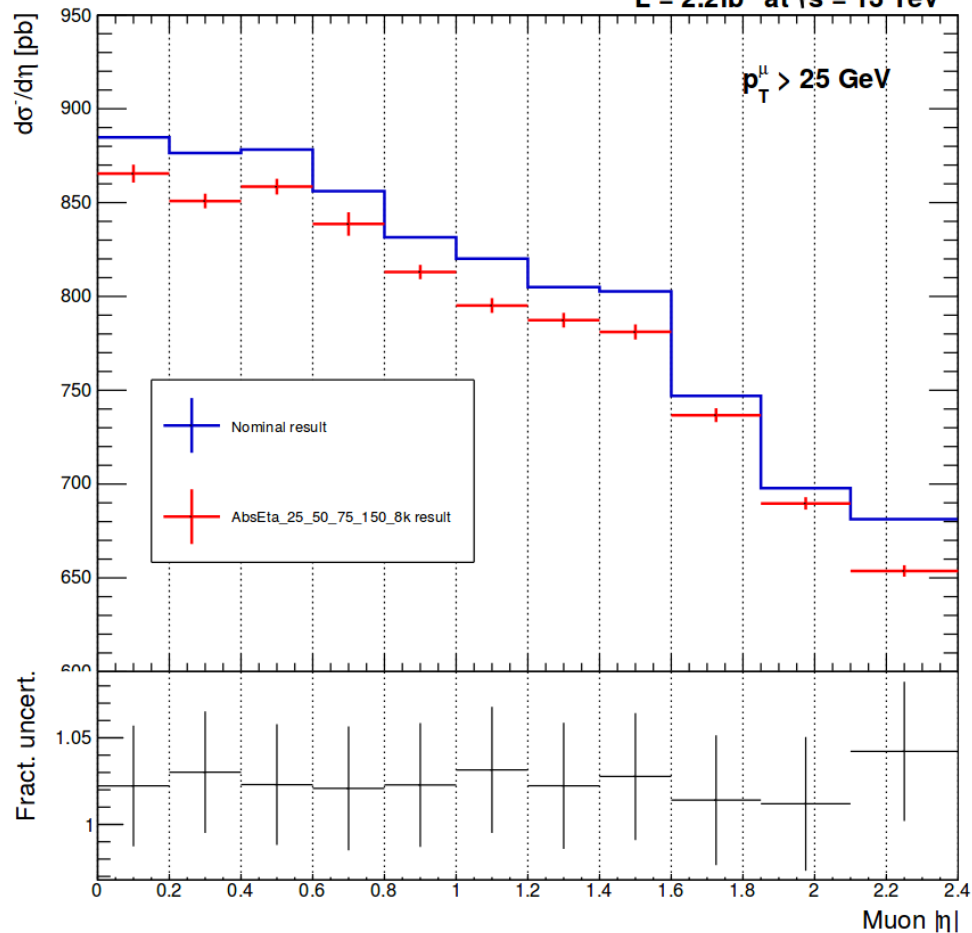


Efficiency(MuHLT neg) for asymmetry $|\eta|$, pt:25-50-75-150-8k

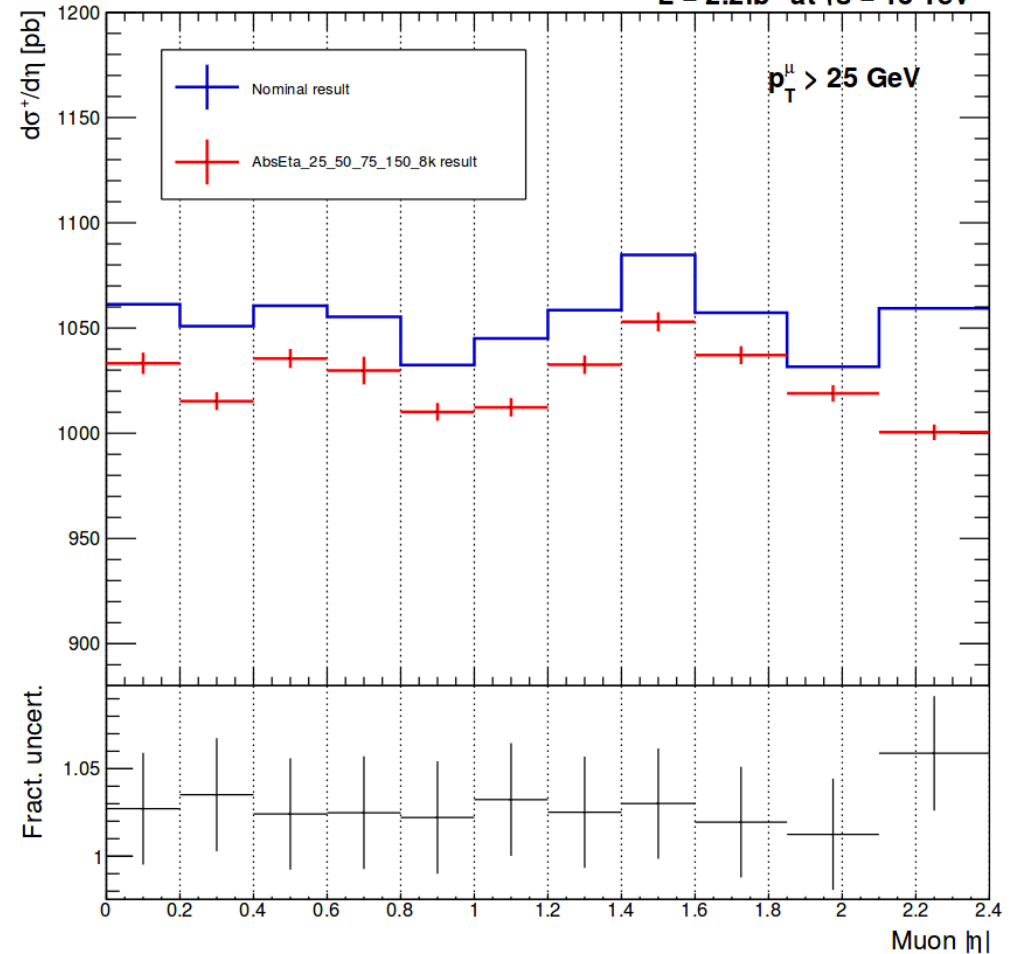


W xsection for asymmetry $|\eta|$, pt:25-50-75-150-8k

AbsEta_25_50_75_150_8k $W^- \rightarrow \mu^- \bar{\nu}_\mu$
L = 2.2fb⁻¹ at $\sqrt{s} = 13$ TeV

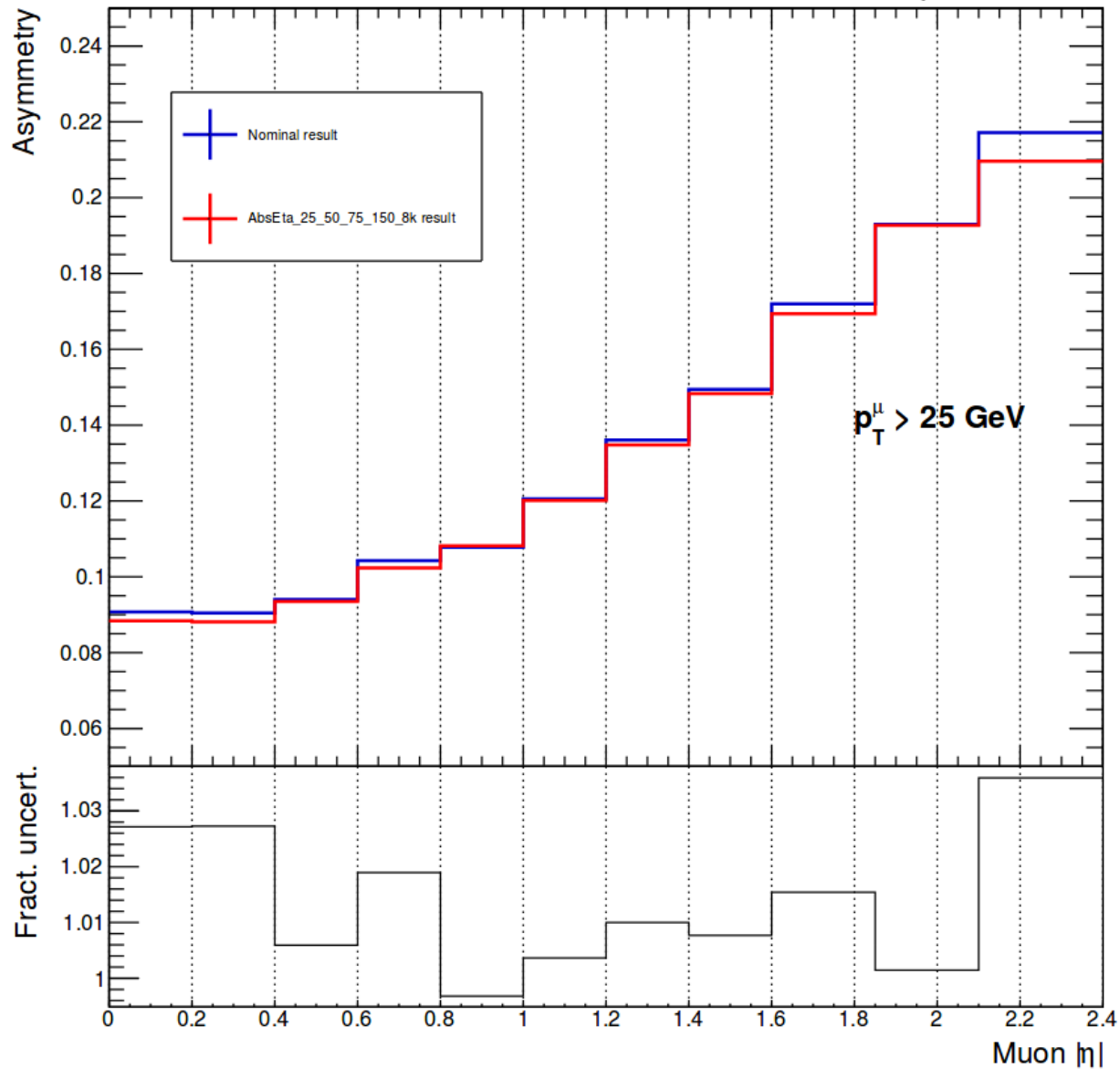


AbsEta_25_50_75_150_8k $W^+ \rightarrow \mu^+ \nu_\mu$
L = 2.2fb⁻¹ at $\sqrt{s} = 13$ TeV

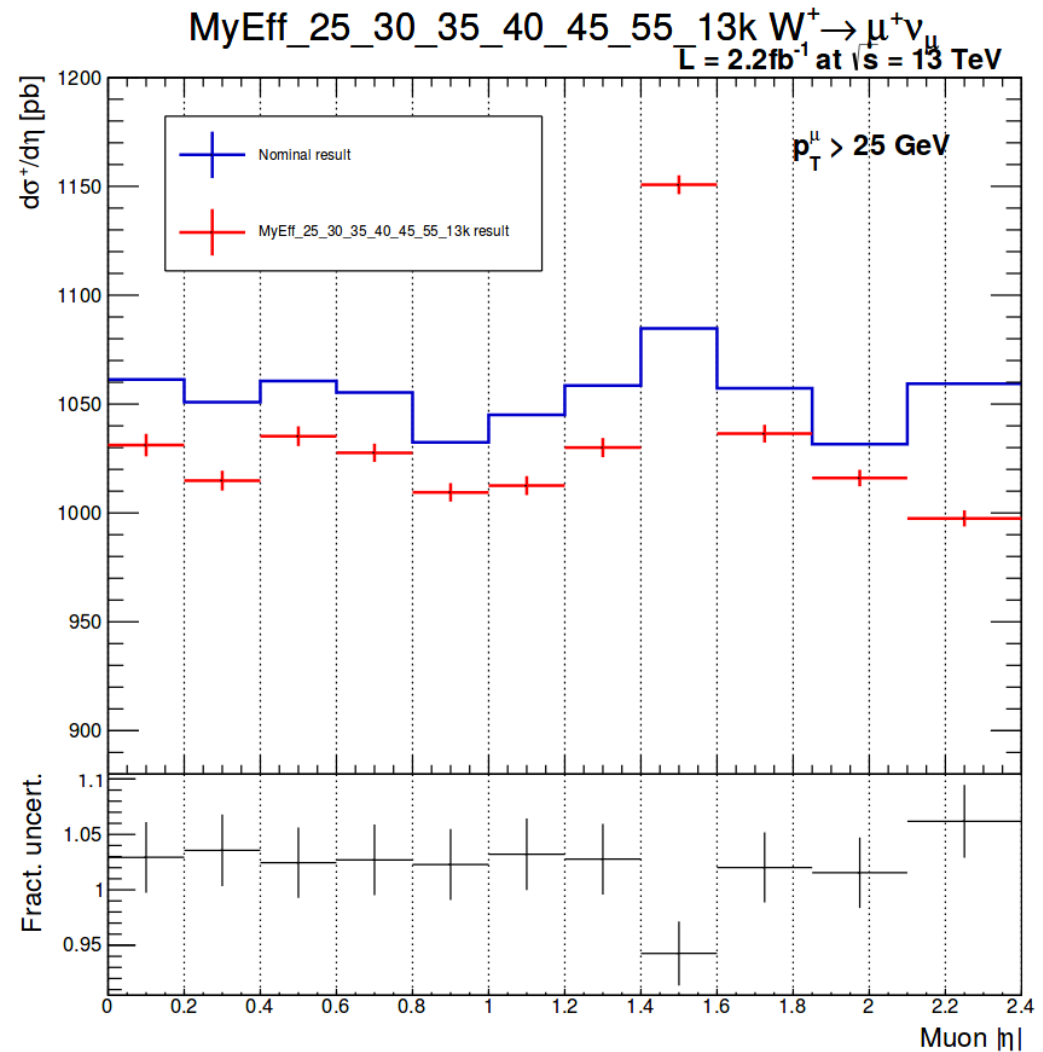
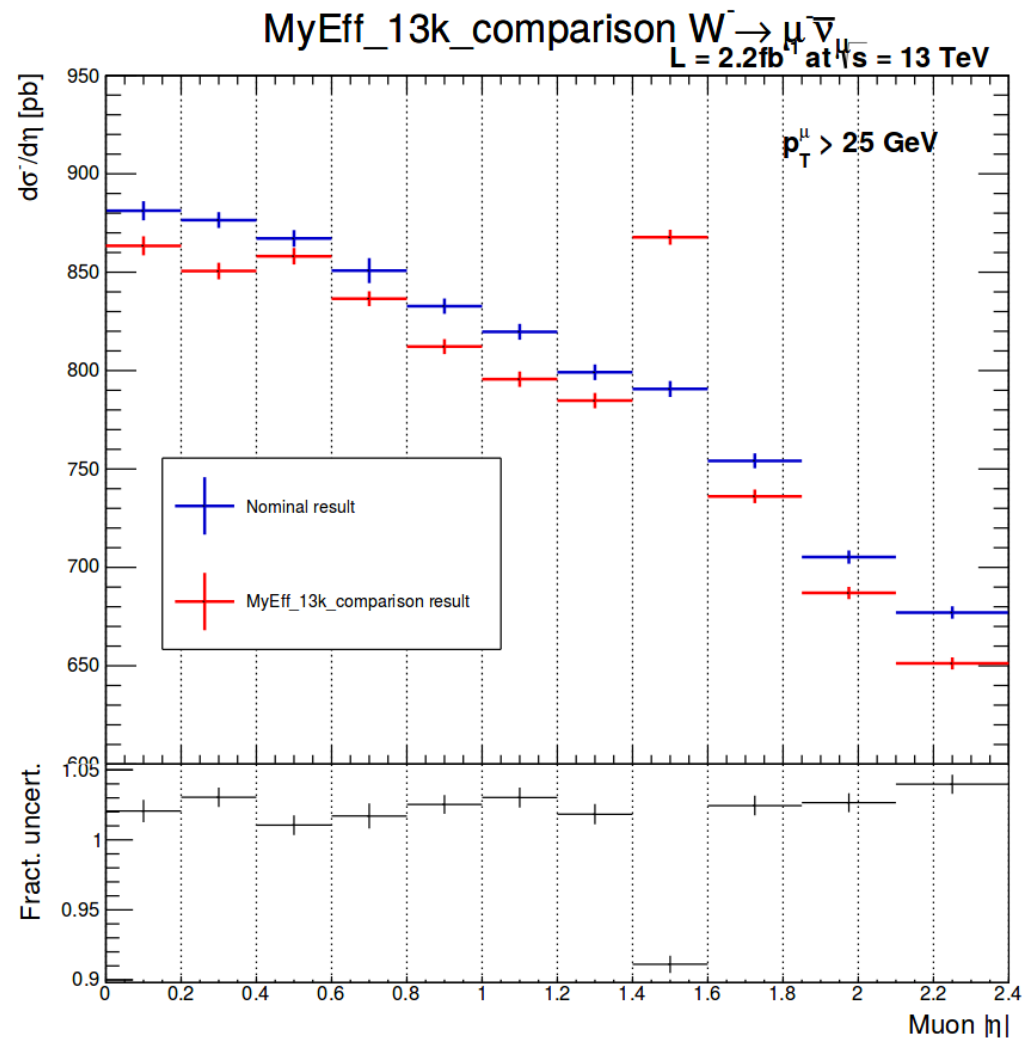


Asymmetry for asymmetry $|\eta|$, pt:25-50-75-150-8k

AbsEta_25_50_75_150_8k asymmetry
 $L = 2.2\text{fb}^{-1}$ at $\sqrt{s} = 13$ TeV



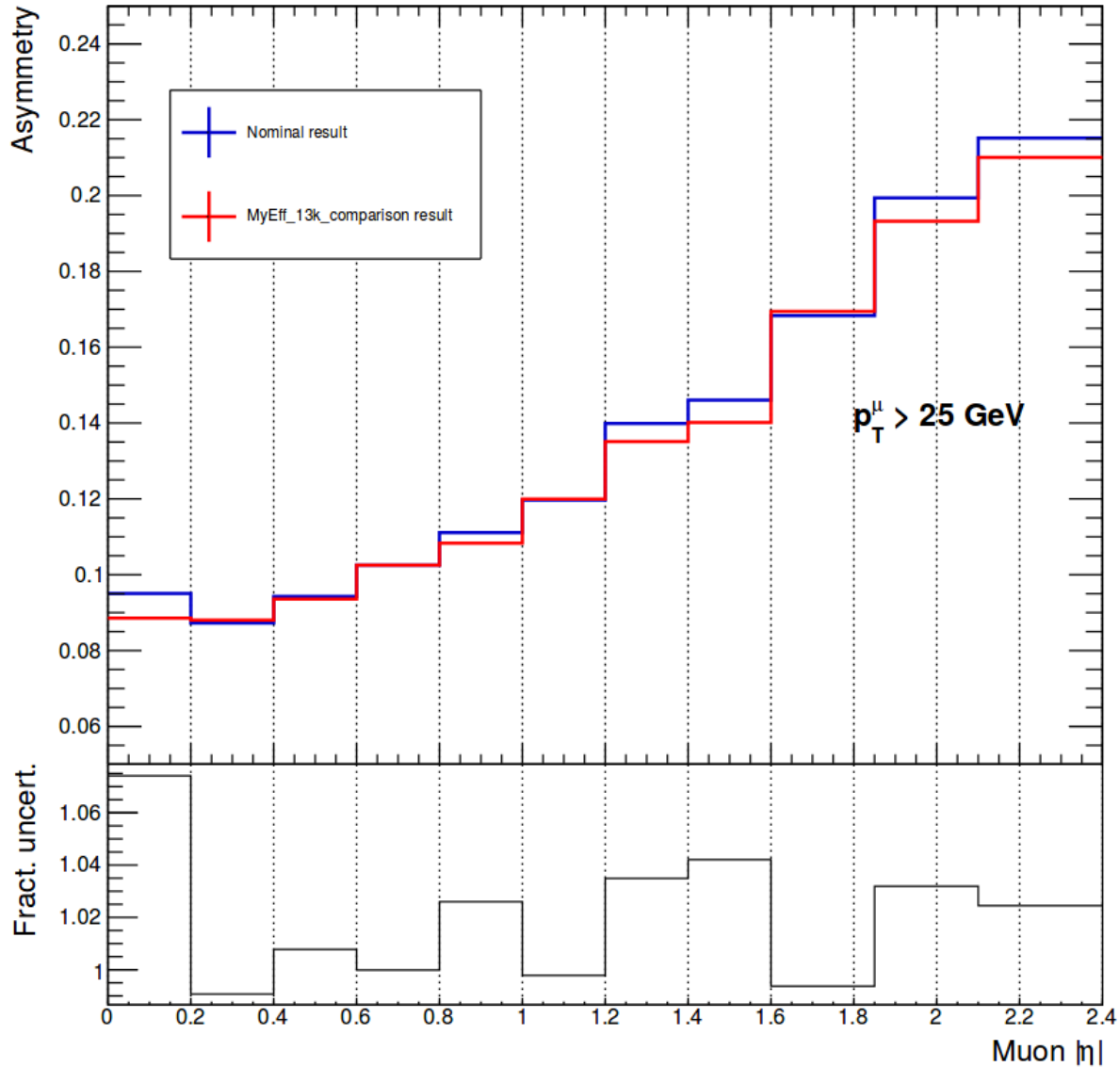
Comparison of two efficiency approaches



Comparison of two efficiency approaches

MyEff_13k_comparison asymmetry

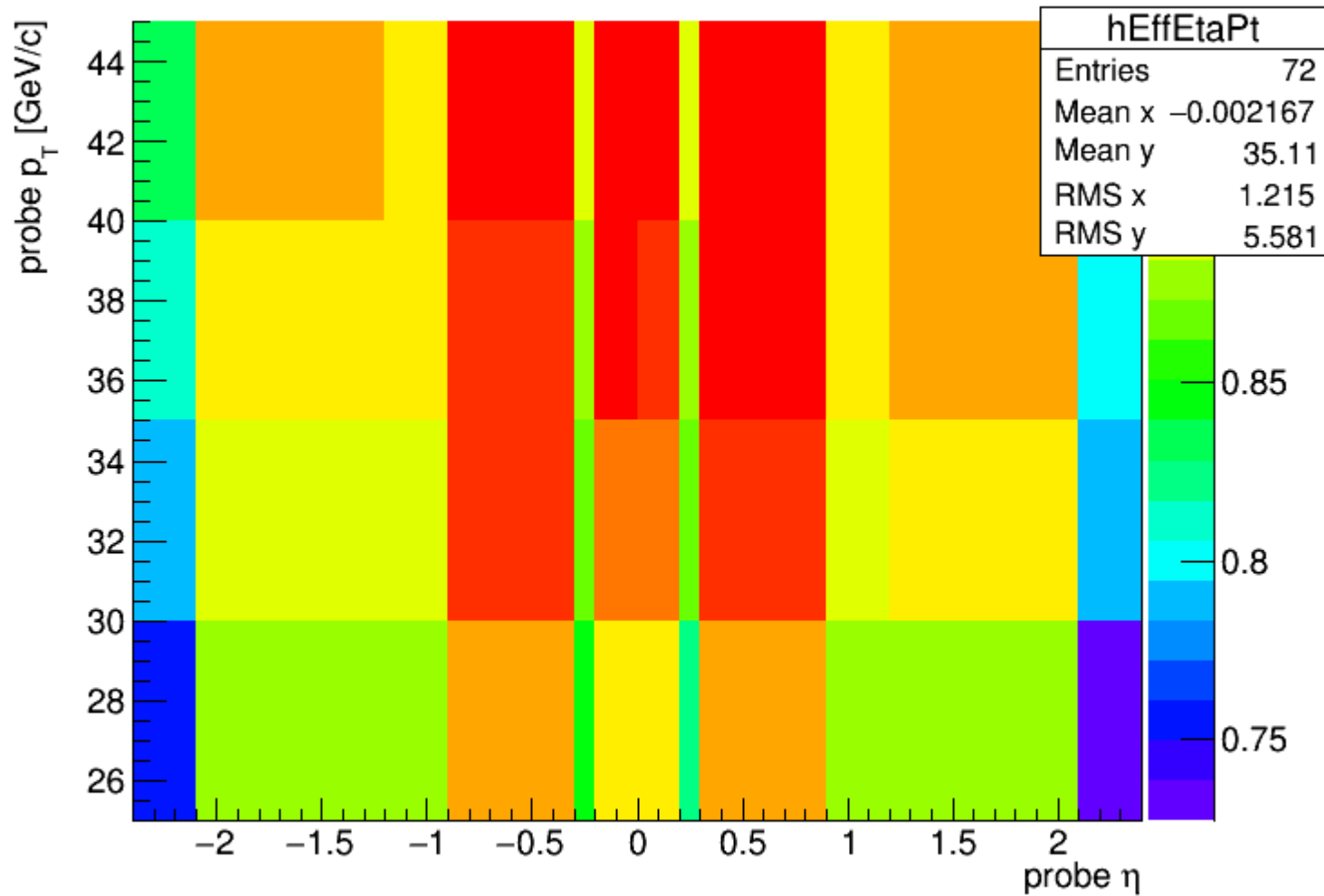
$L = 2.2\text{fb}^{-1}$ at $\sqrt{s} = 13\text{ TeV}$



W^+ xsection for different eta bins

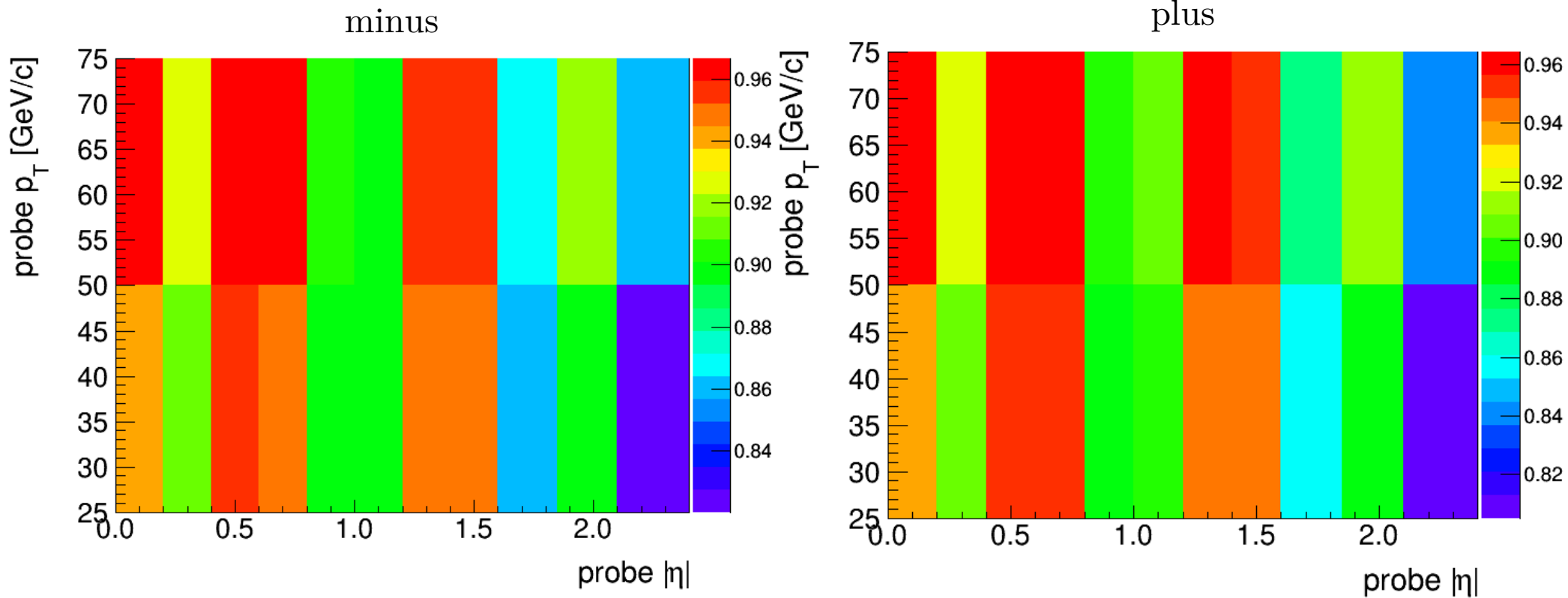
Back-up

Original efficiency



Studies of proper eta-pt binning for efficiency estimation

“HLT”



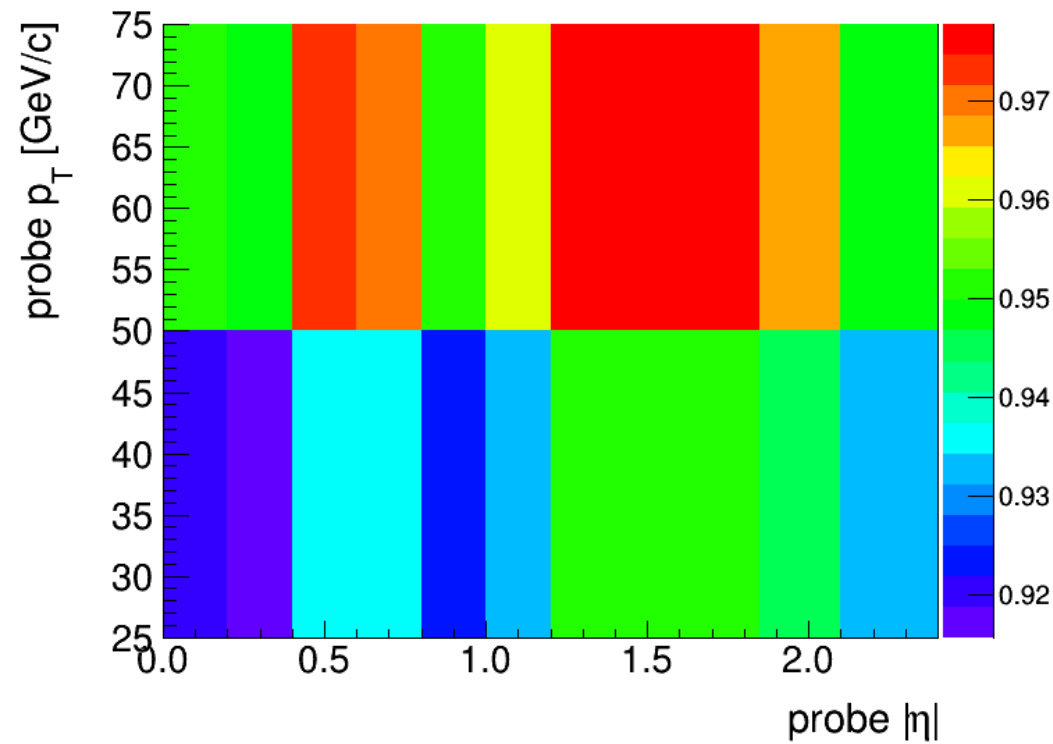
Efficiency Table:

	[0, 0.2]	[0.2, 0.4]	[0.4, 0.6]	[0.6, 0.8]	[0.8, 1]	[1, 1.2]	[1.2, 1.4]	[1.4, 1.6]	[1.6,1.85]	[1.85, 2.1]	[2.1, 2.4]
[25, 50]	0.9399105	0.9116853	0.9551494	0.9496991	0.8986000	0.8940059	0.9444854	0.9463024	0.8583558	0.8940631	0.8201858
[50, 75]	0.9597058	0.9259368	0.9664923	0.9613569	0.9036875	0.8994040	0.9569394	0.9575415	0.8698177	0.9152234	0.8572589
[75, 150]	0.9611382	0.9237232	0.9701525	0.9600958	0.9071847	0.8895948	0.9460968	0.9635774	0.8524577	0.9173573	0.8571013
[150,8000]	0.9657079	0.9277078	0.9663554	0.9743980	0.8780497	0.8516569	0.9497691	0.9564956	0.8291378	0.8762242	0.7500278

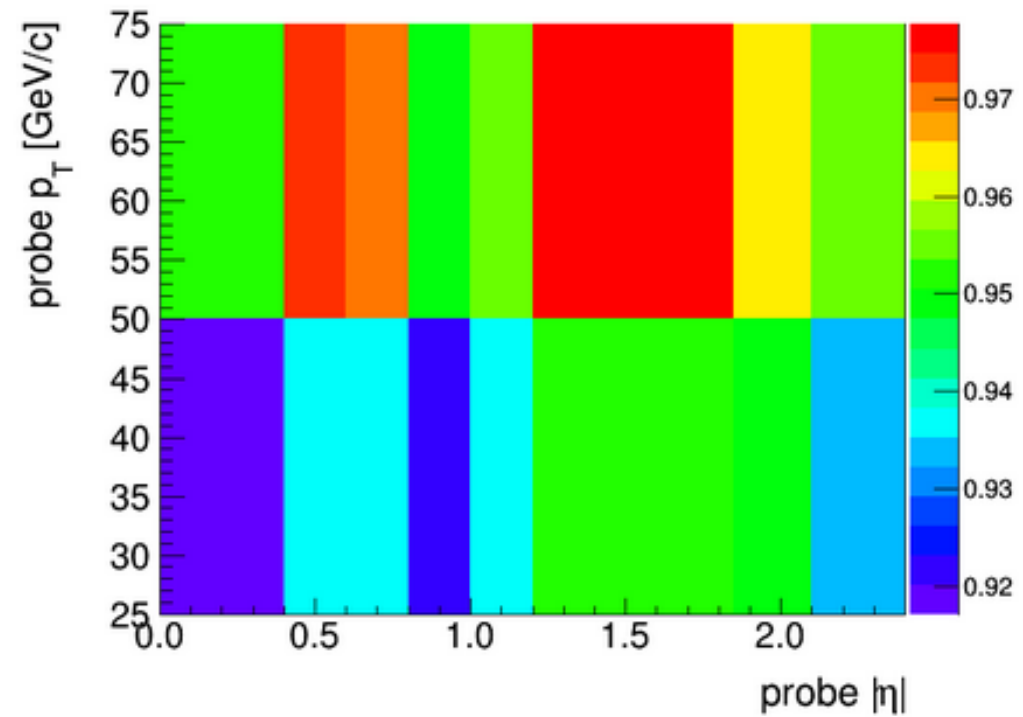
Studies of proper eta-pt binning for efficiency estimation

“Selection”

minus

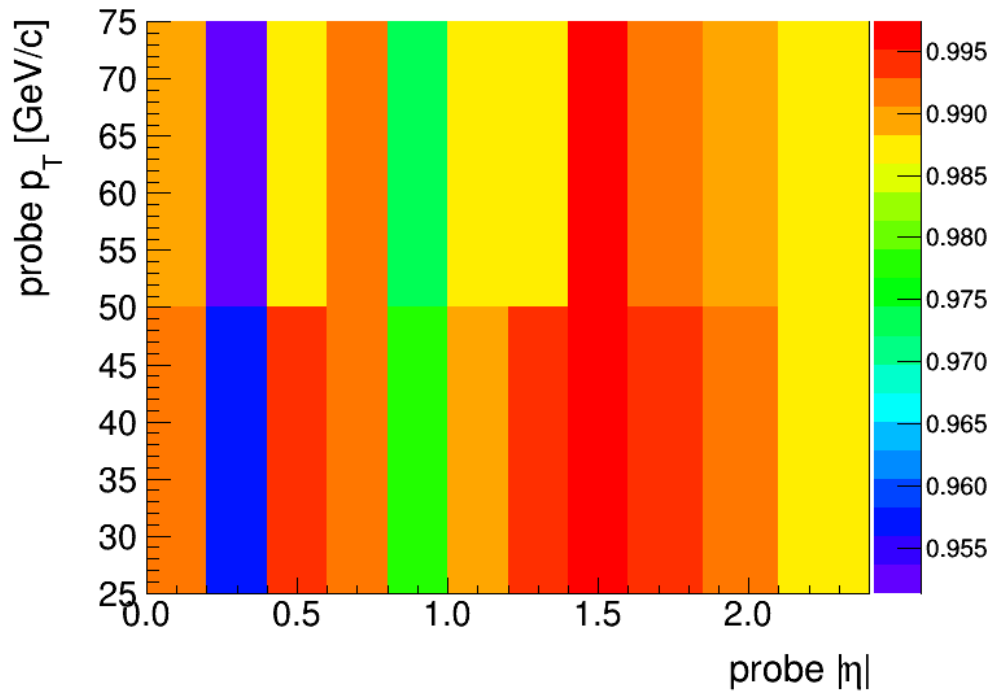


plus

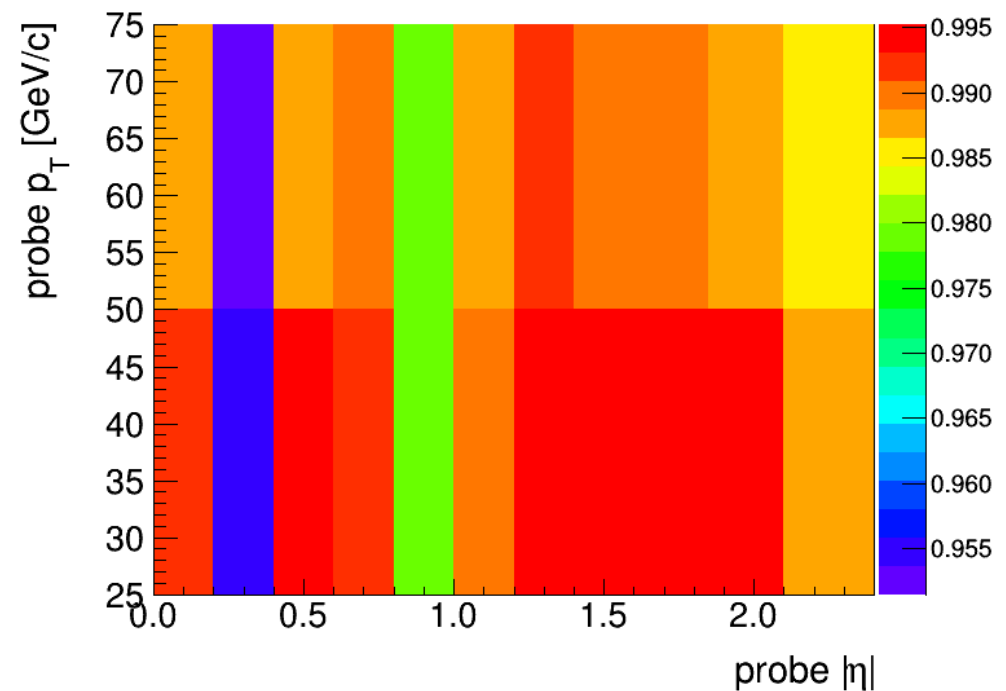


Studies of proper eta-pt binning for efficiency estimation “Standalone”

minus



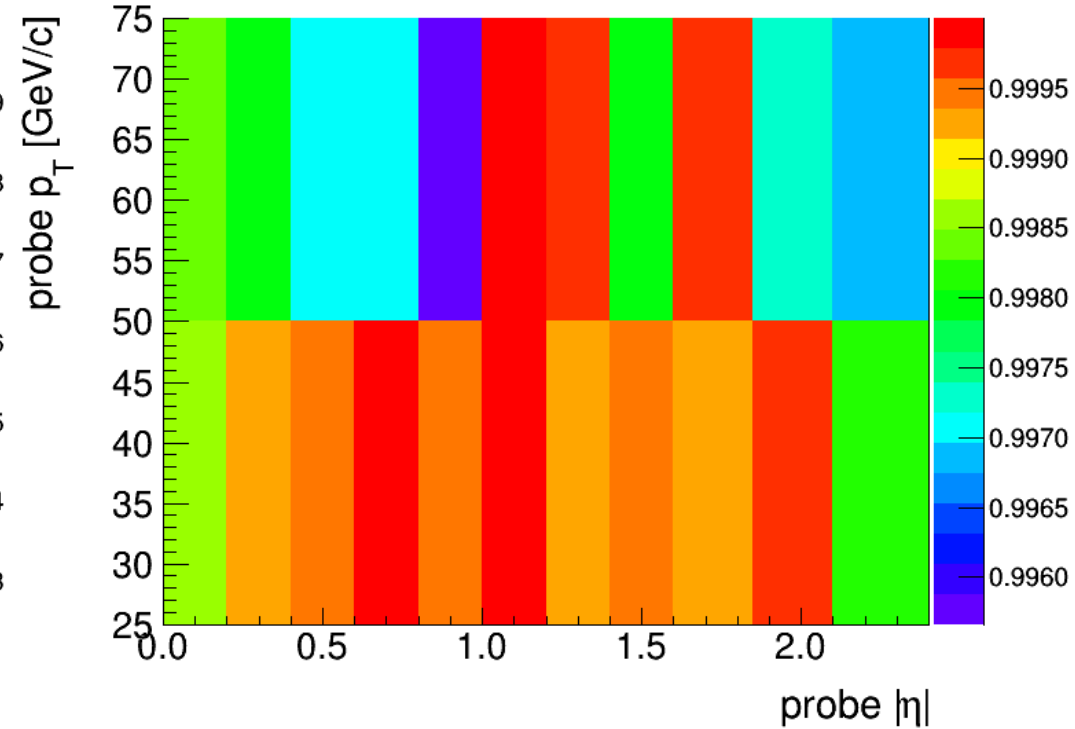
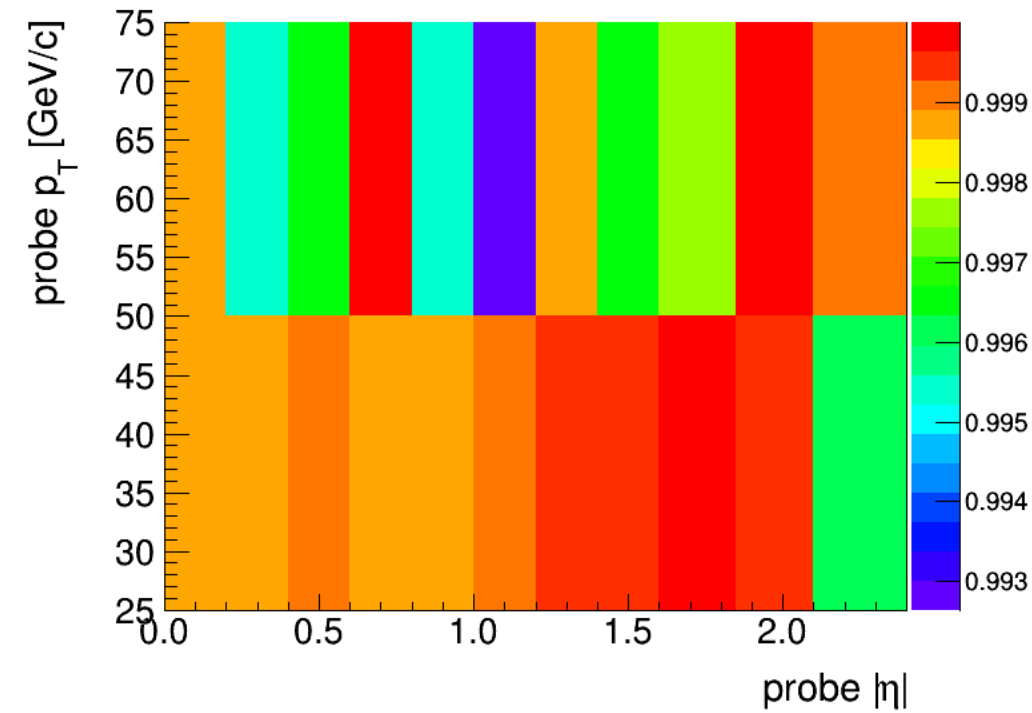
plus



Studies of proper eta-pt binning for efficiency estimation “Tracking”

minus

plus



MC check

