Updates on $\tau \to 3\mu$

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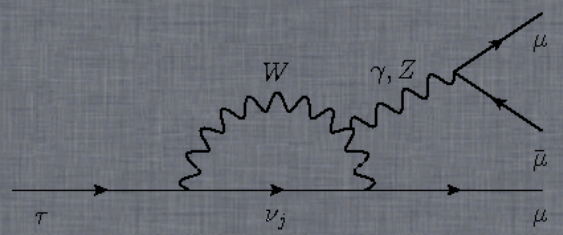
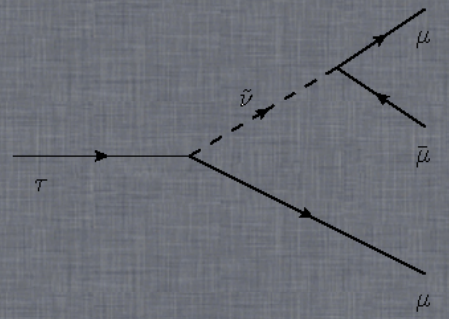
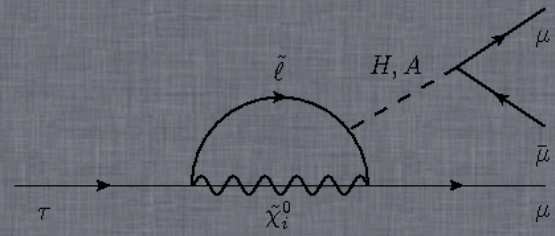
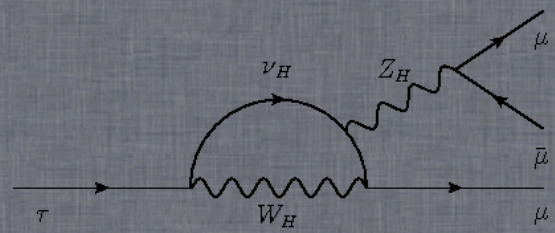
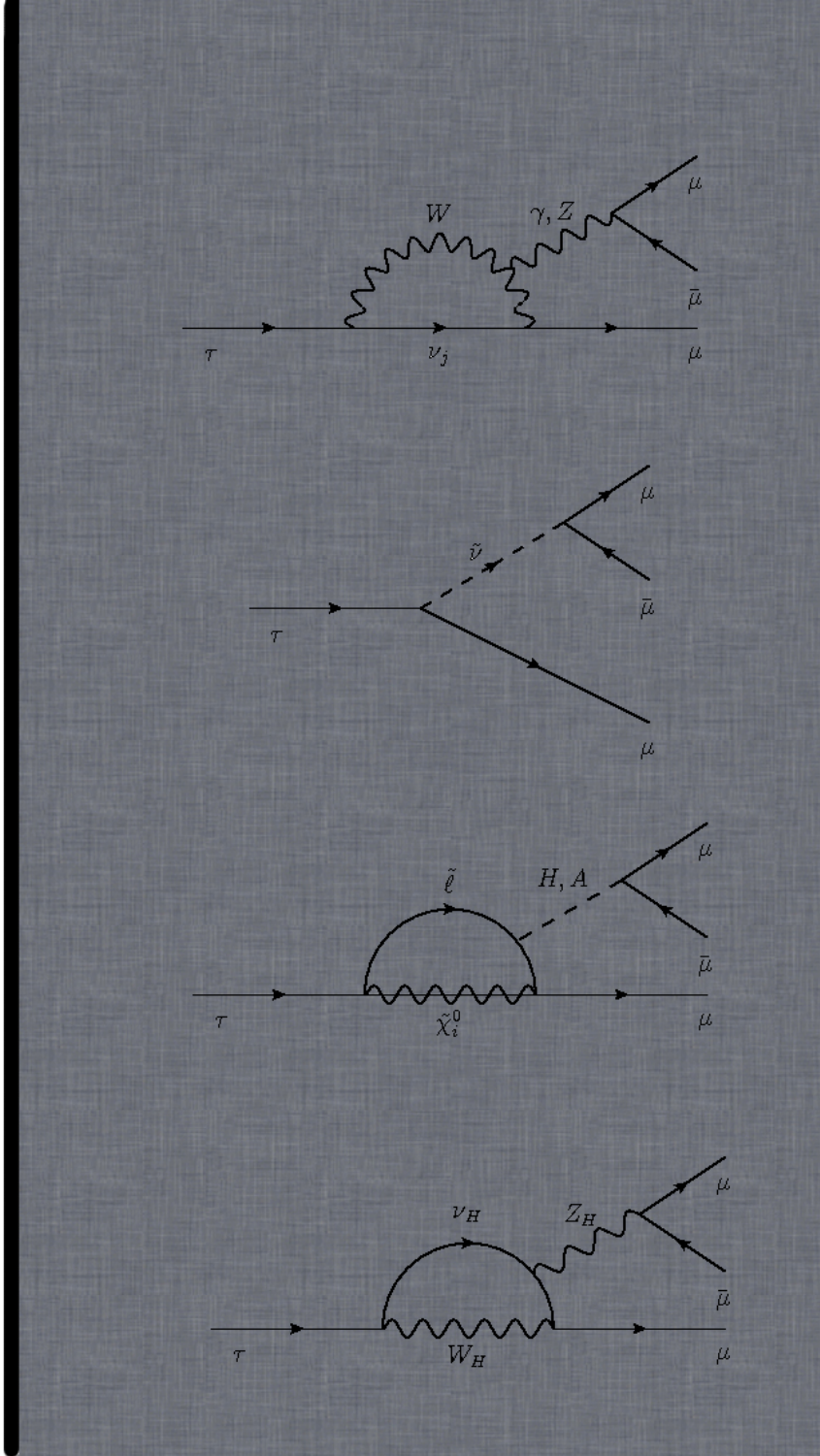








Background sample size studies



How much $b\bar{b}/c\bar{c}$ bck we need.

The idea is as follows:

- Feasibility studies should be done separately on $b\bar{b}$ and $c\bar{c}$ due to different physics and difference in normalization ~ 5

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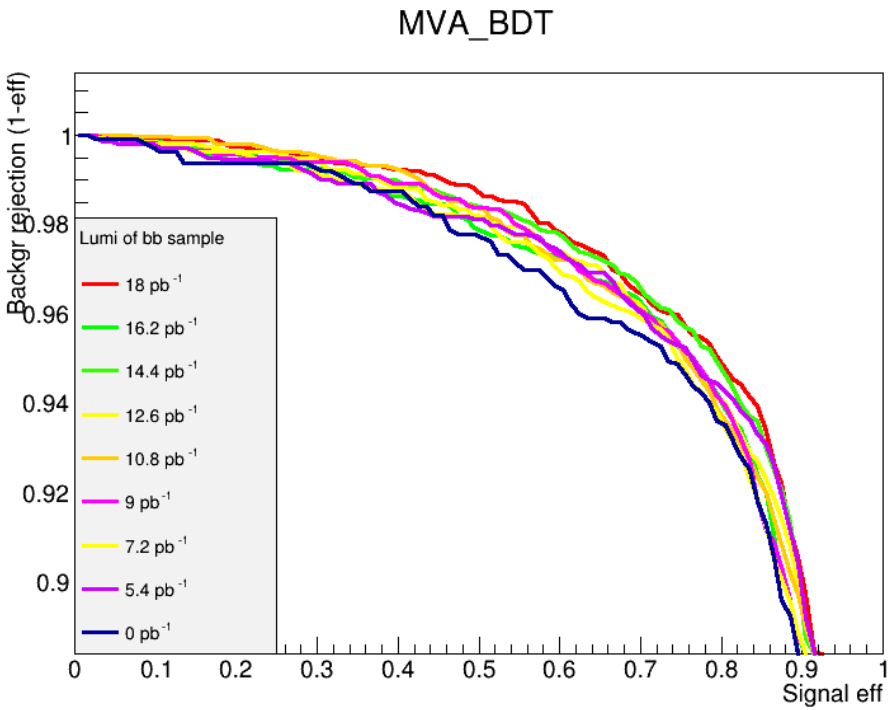
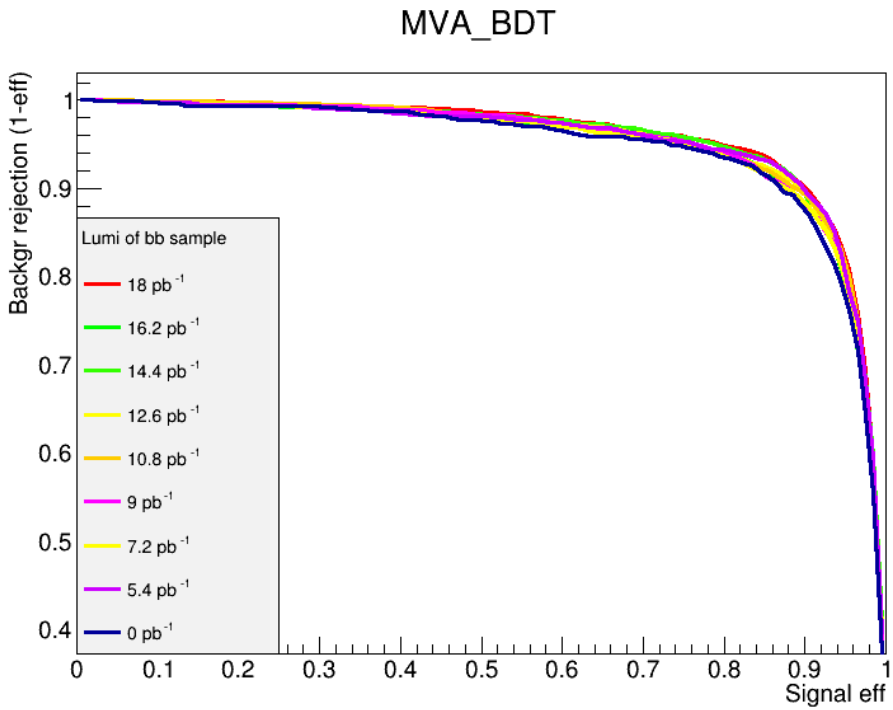
$b\bar{b}$ studies.

- Take full sample of $c\bar{c} \sim 2.6pb^{-1}$
- Scan the $b\bar{b}$ sample.





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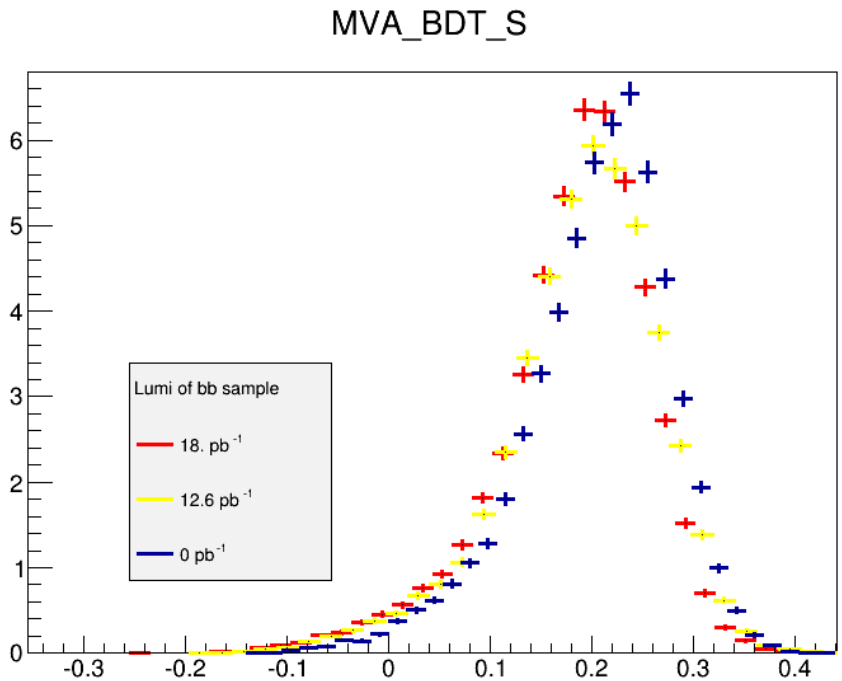
$b\bar{b}$ studies.

- hmmm....
- Plots look more statistical then a trend.
- Let's look at the numbers.

Criteria	$18pb^{-1}$	$16.2pb^{-1}$	$14.4pb^{-1}$	$12.6pb^{-1}$	$10.8pb^{-1}$	$9pb^{-1}$	7.2	5.4	0
ROC 80%	78.92	78.58	78.80	78.68	78.72	78.69	78.51	78.57	78.36
ROC 50%	49.78	49.62	49.69	49.69	49.77	49.70	49.62	49.59	49.59
ROC 30%	29.95	29.89	29.91	29.93	29.96	29.88	29.89	29.88	29.87
Mean	0.180	0.206	0.188	0.188	0.187	0.196	0.21	0.192	0.203
RMS	0.0765	0.0875	0.08021	0.0777	0.0782	0.0788	0.0859	0.0779	0.0723

$b\bar{b}$ studies.

- Looks like from $7.2 pb^{-1}$ the BDT is only fluctuating.
- We have 3 times more MC than we need.



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