RECO 12 vs 14, vol 1

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August 7, 2014

Basics

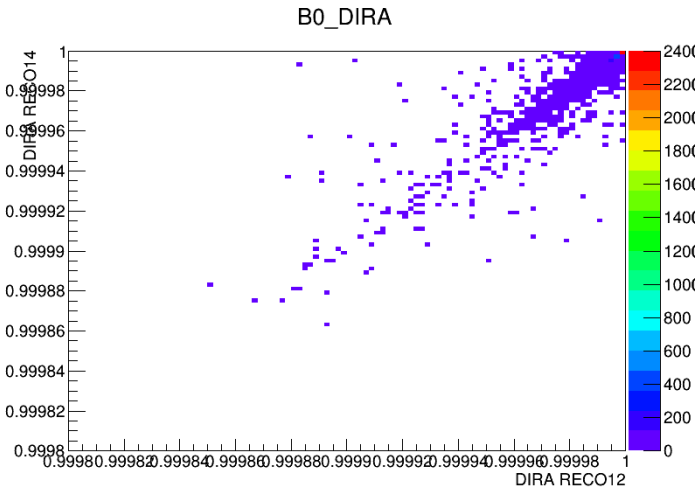
As you should now from email exchange:

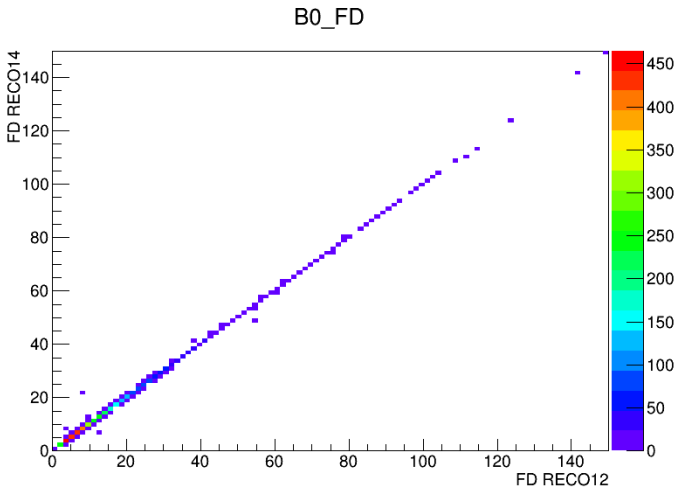
- $B^0 \rightarrow K^* \mu\mu$ PHPS MC was produced.
- We also have SM MC.
- $J/\psi K^*$ on way(later today we should have it).
- All are SIM08
- For now 4 *TeV* data, 3.5 *TeV* in queue.
- The same events(common, Gauss, Boole, Moore) are processed by 2 different Brunel versions(one for RECO12, other for RECO14).
- Since I don't have full selection, I am studying the events that pass our stripping 20.
- Events are truth matched between two ntuples using EVENTNUMBER.

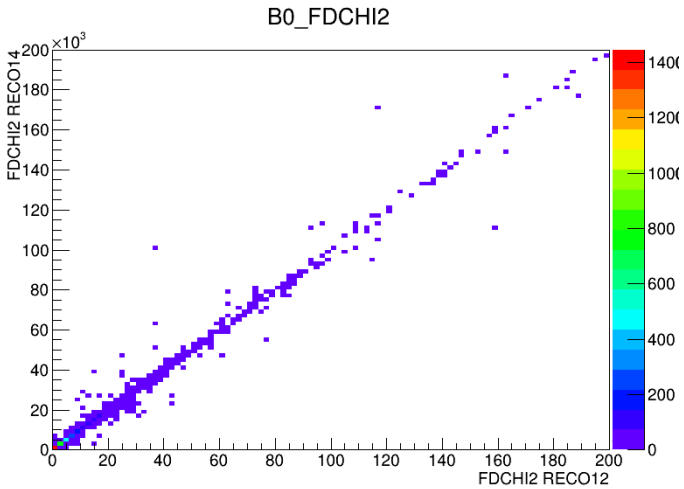
Results/Plots 1

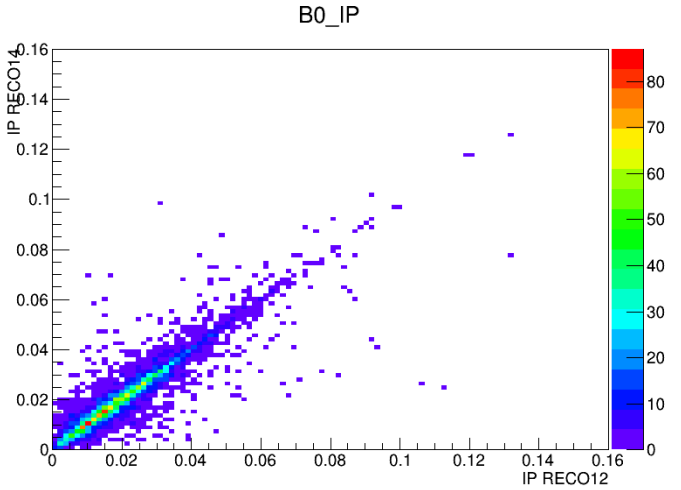
- RECO 12 and STRIPPING 20 selected 5054
- Among those 4667 are also selected by RECO 14 and our stripping.
- The over lap is about $92.3 \pm 0.4\%$.
- A bit higher compared to what we saw in data....

Results/Plots B^0









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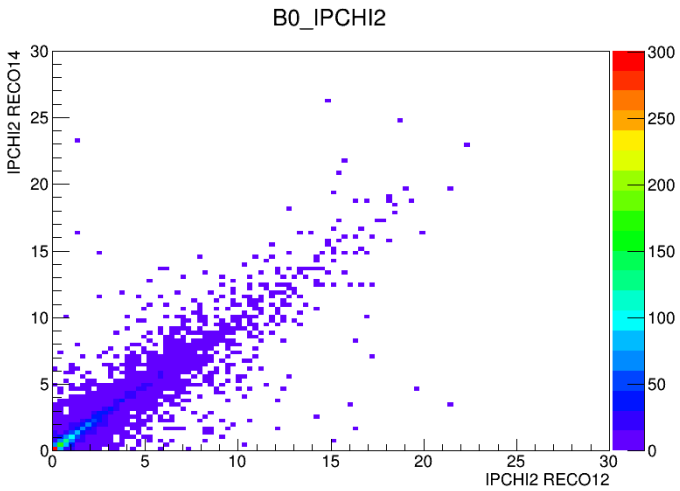
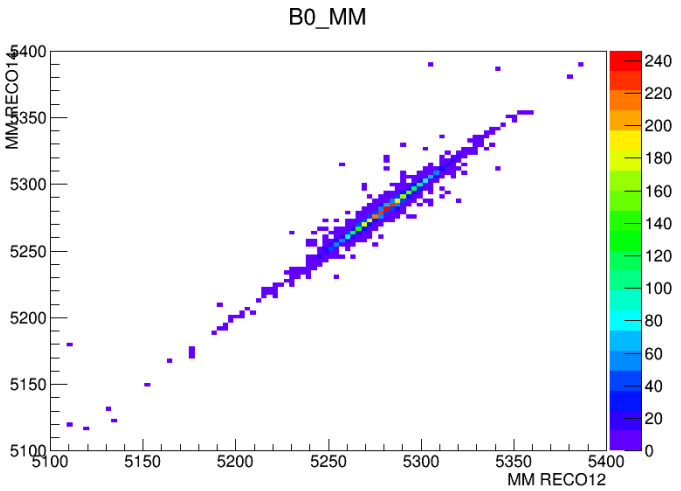
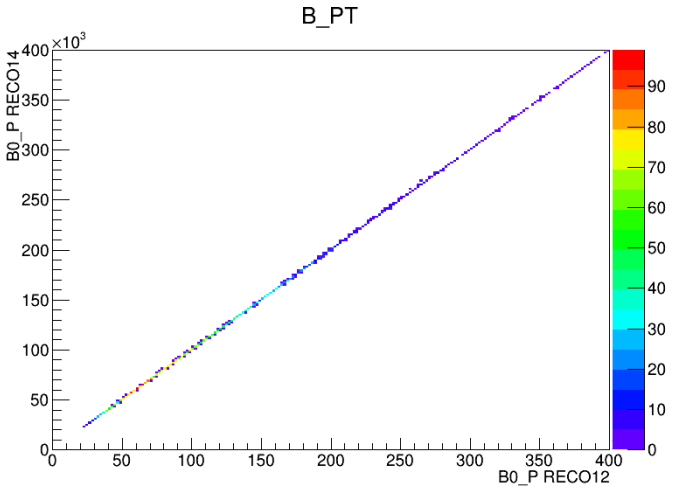
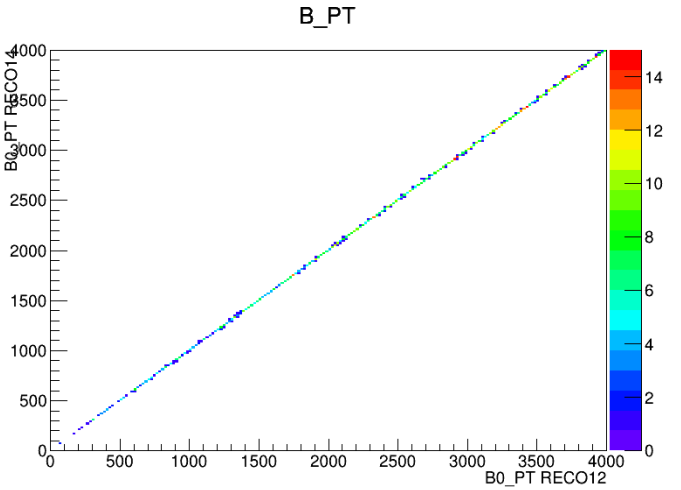
Results/Plots B^0









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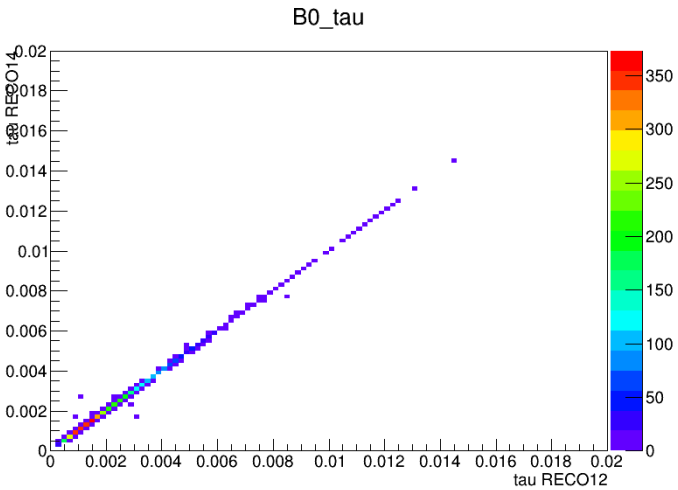
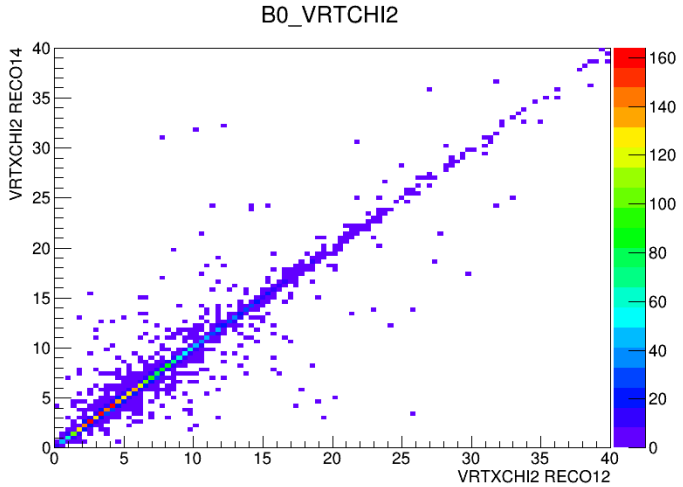
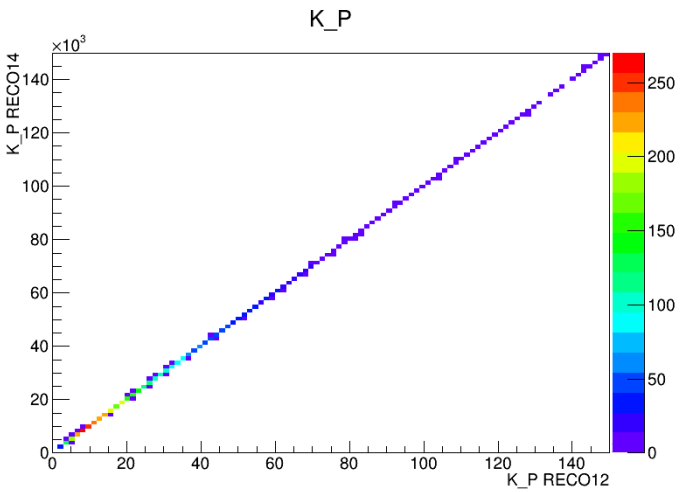
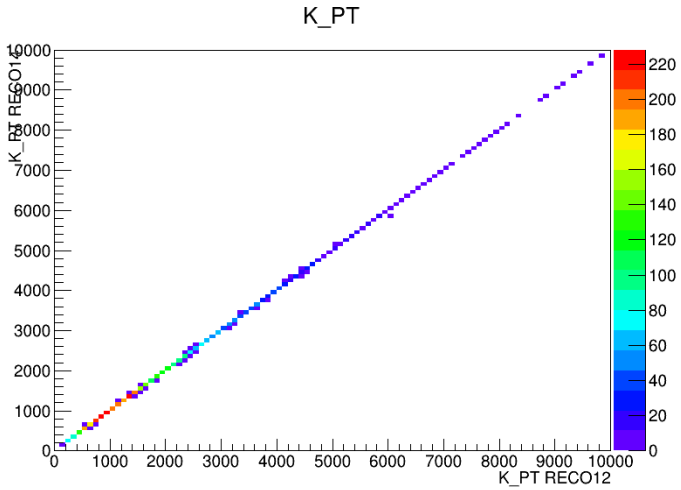
Results/Plots B^0

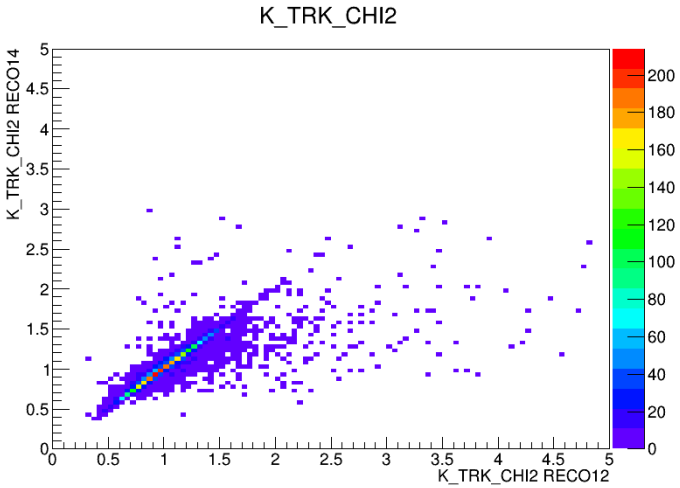




Results/Plots K







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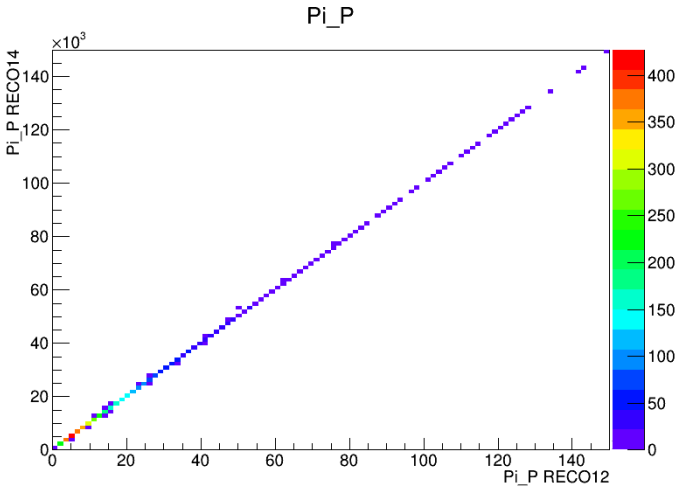
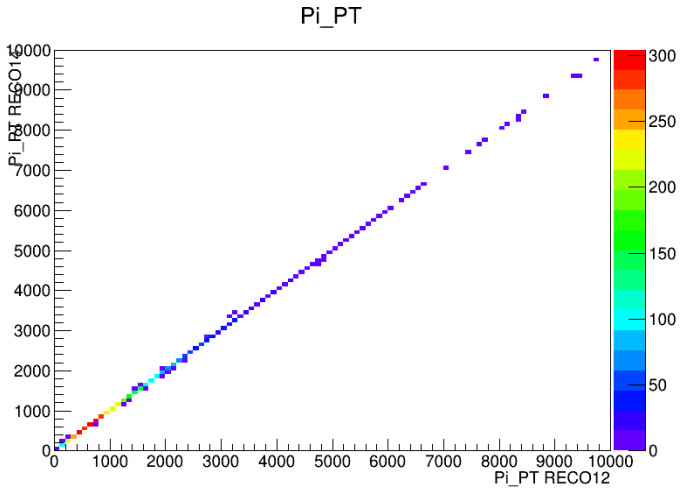
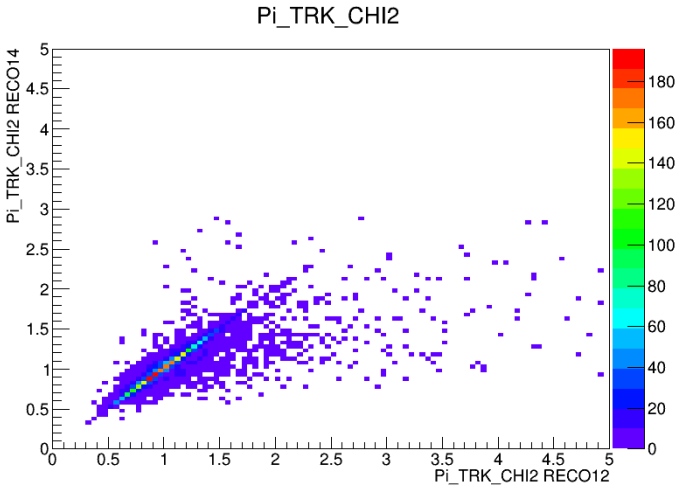
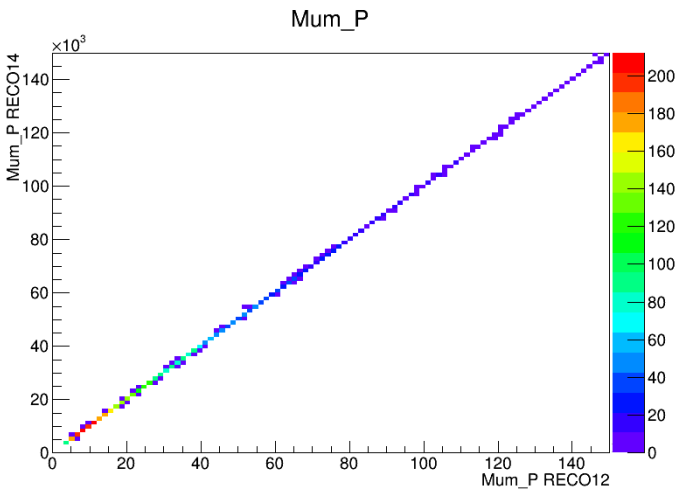
Results/Plots π

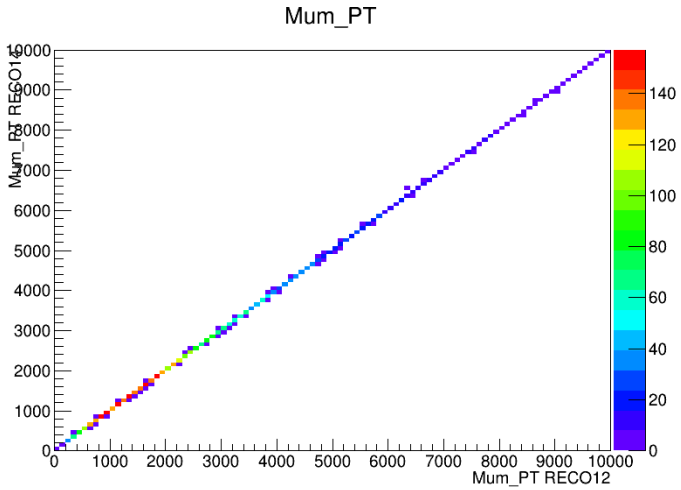


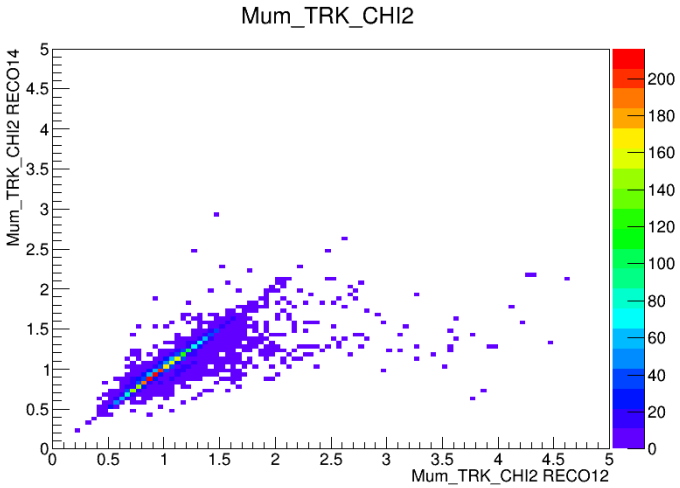




Results/Plots μ^-







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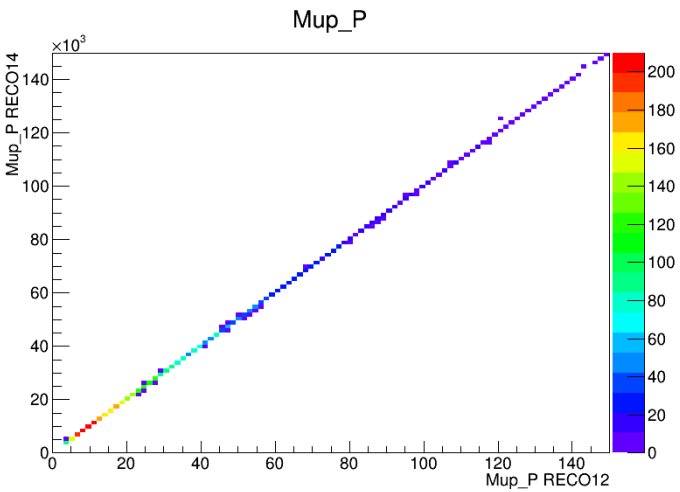
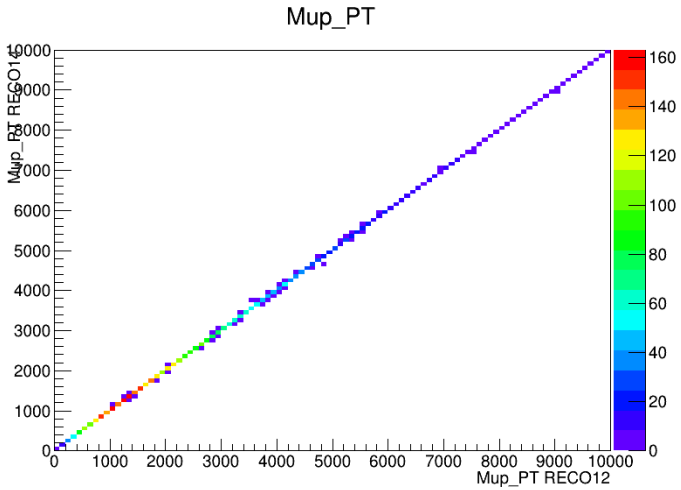
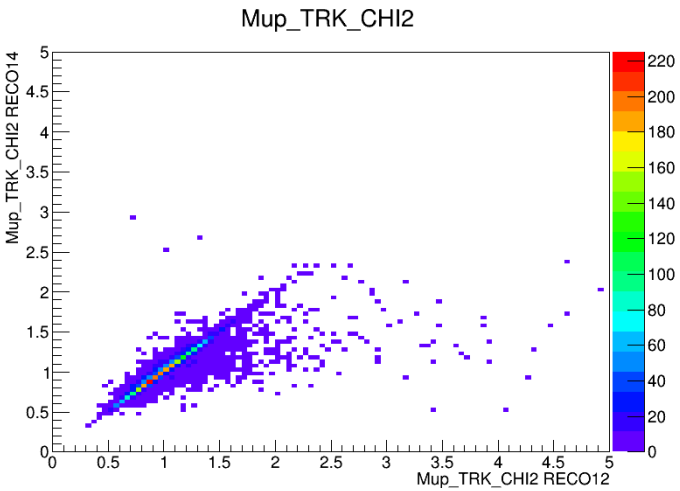
Results/Plots μ^+







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Conclusions

1. The spread of the variables looks smaller then in data.
2. This needs further investigations: $J/\psi K^*$, full selection, 3.5 TeV,(more suggestions?)
3. What else should I compare? PID? other? Let me know.
4. The thing that comes to my mind when I look at those plots is:

"The truth is rarely pure and never simple."