

Studies on interference effects of flavor changing neutral currents in the top sector (tu_γ, tc_γ couplings)

Salvatore La Cagnina

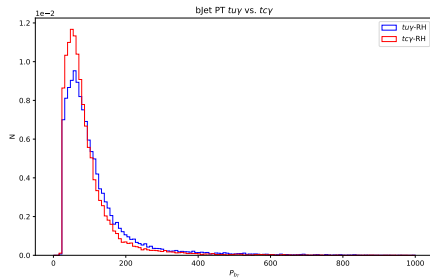
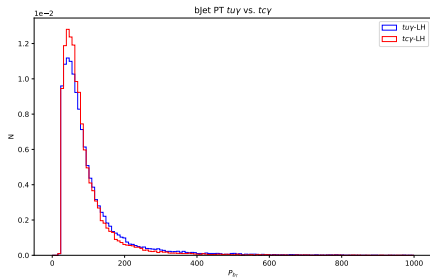
Technische Universität Dortmund, Lehrstuhl EIV

October 24, 2017

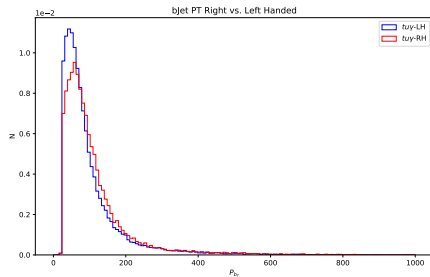
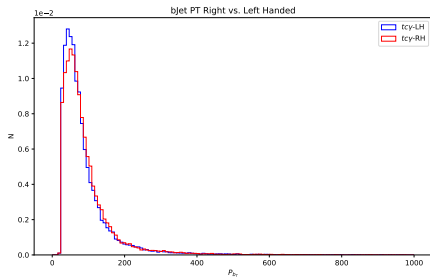
Creation of following plots:

- TopFCNC Model in MadGraph@NLO
- generated top quark + photon in final state
- 50k Events for each $tu\gamma$ and $tc\gamma$ + left and right handed
- changed corresponding coefficients per sample
- Decays using MadSpin and showering using Pythia 8
- DELPHES with ATLAS card as basic detector simulation
- Plots created using detector simulation output and simple reconstruction for Top and W Boson
- Look at bJet, Photon, W Boson and Top Quark p_T and mass distributions
- Now including truth data

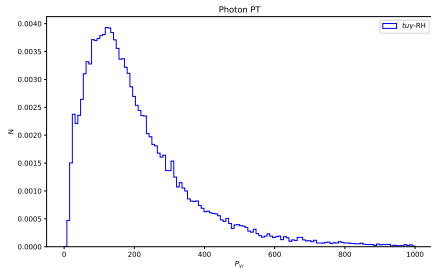
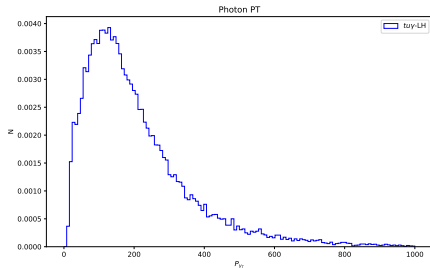
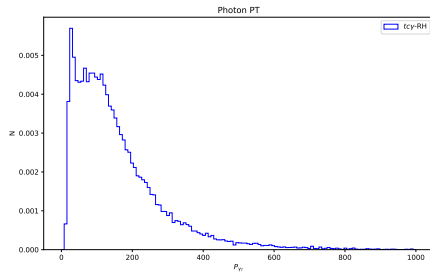
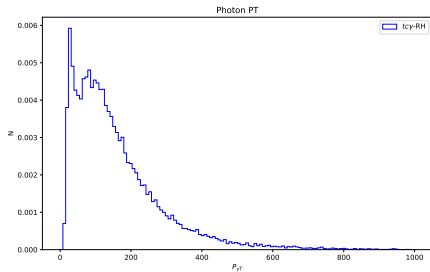
bJets tua vs tca



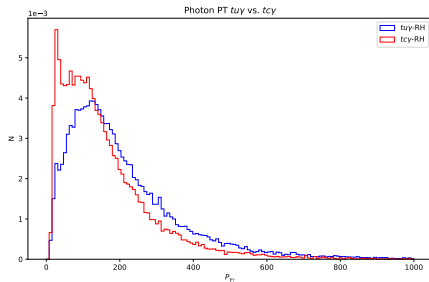
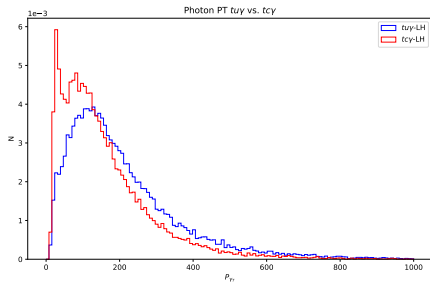
bJets LH vs RH



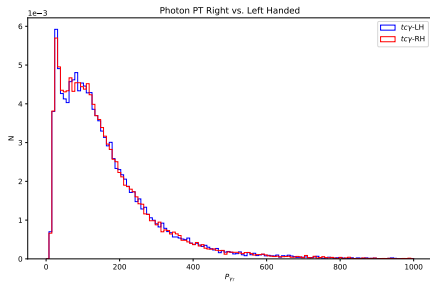
photon



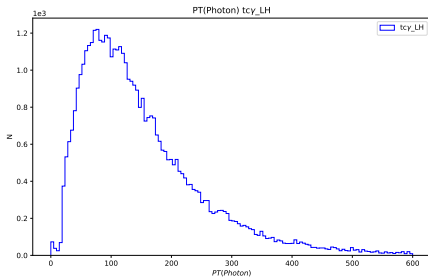
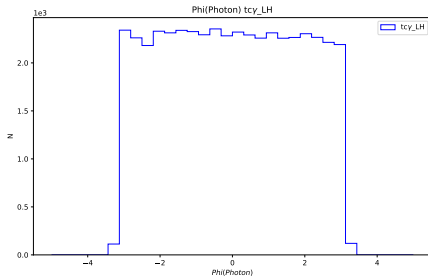
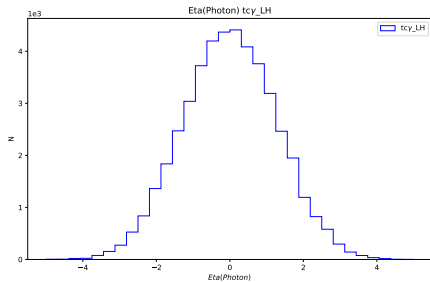
photon tua vs tca



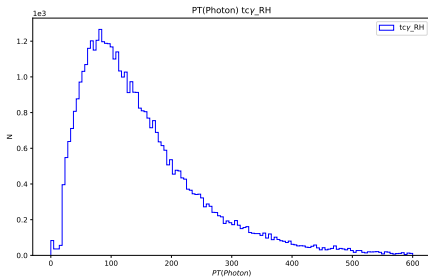
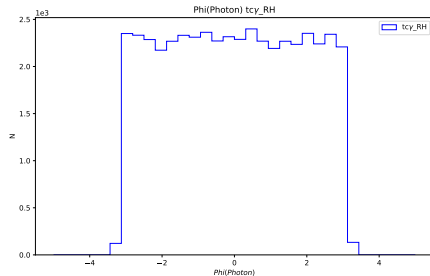
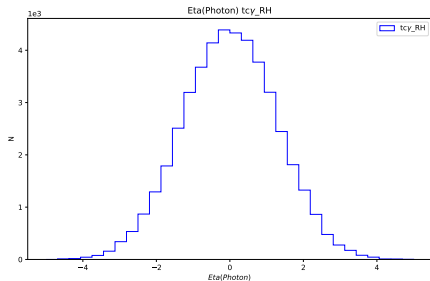
photon LH vs RH



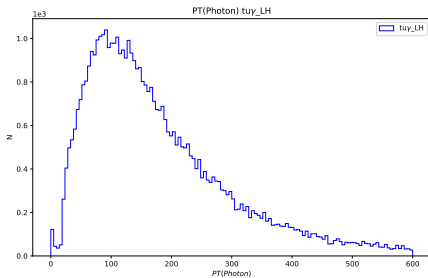
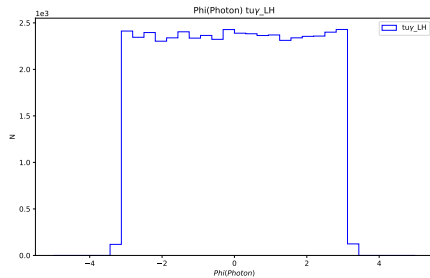
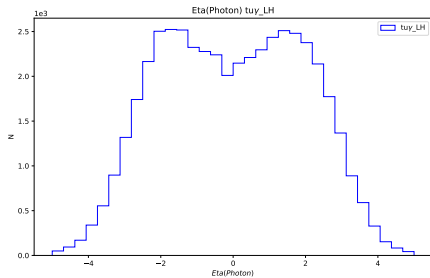
Photon_truth



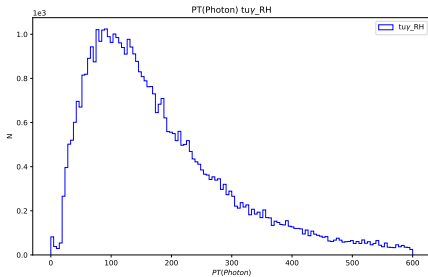
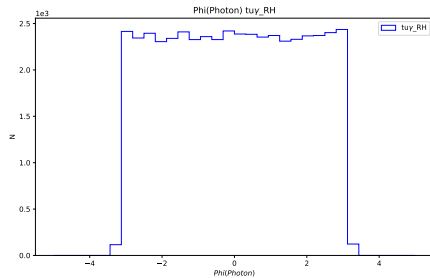
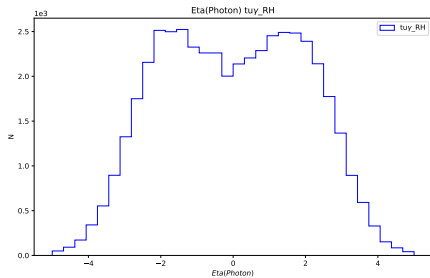
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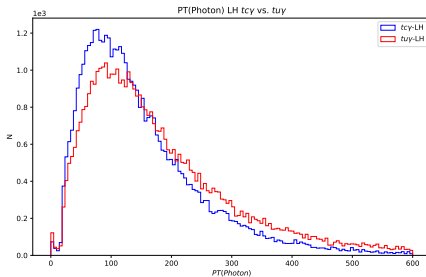
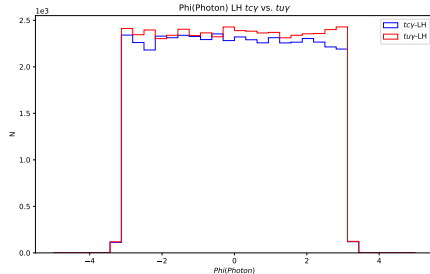
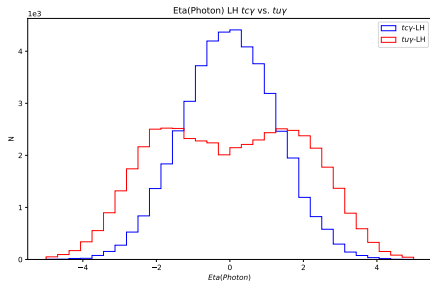
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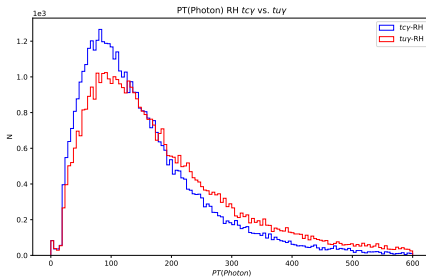
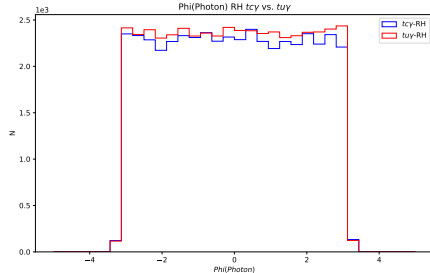
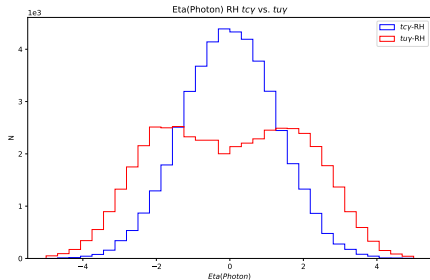
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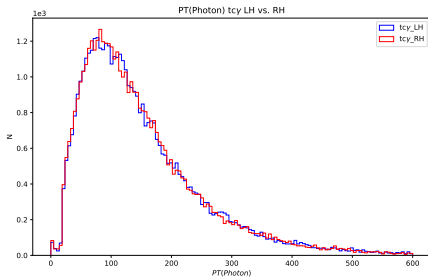
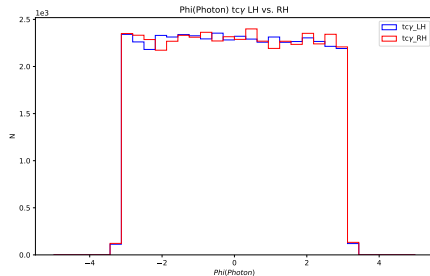
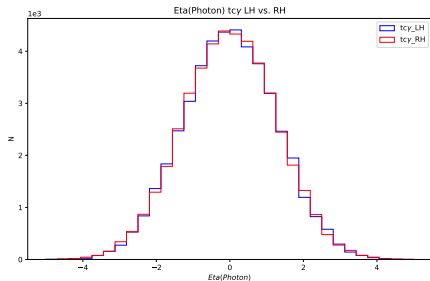
Photon_truth tua vs tca



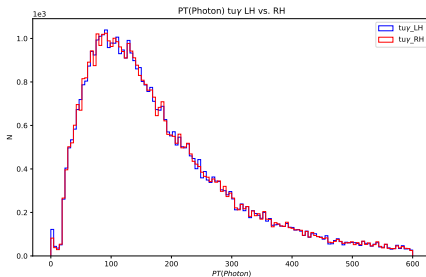
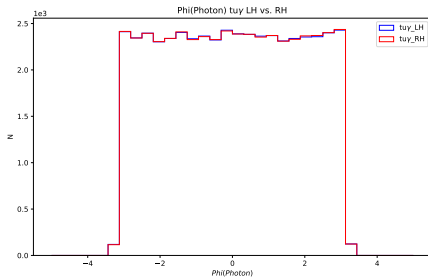
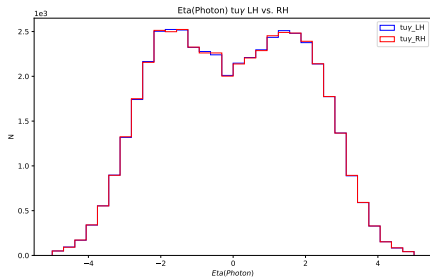
Photon_truth tua vs tca



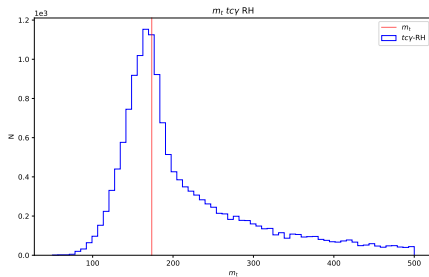
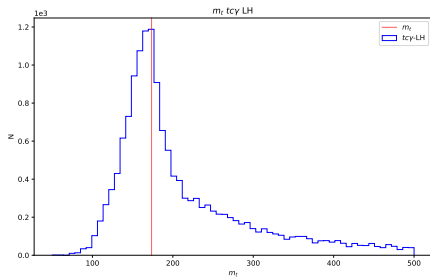
Photon_truth LH vs RH



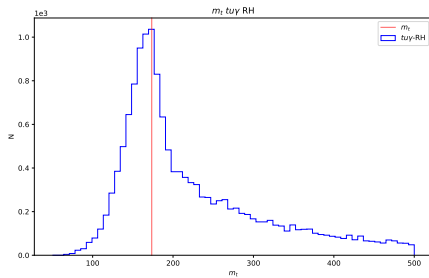
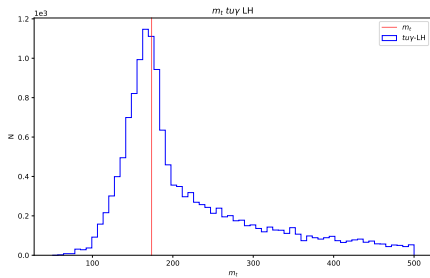
Photon_truth LH vs RH



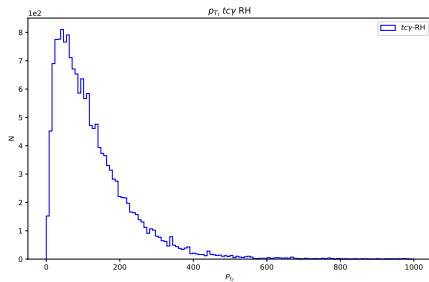
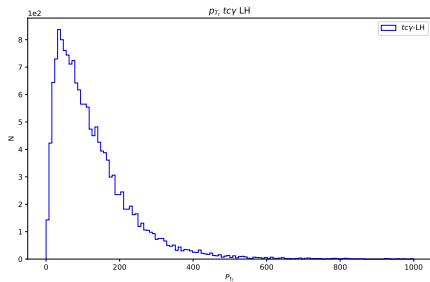
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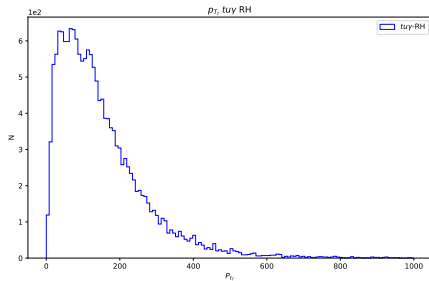
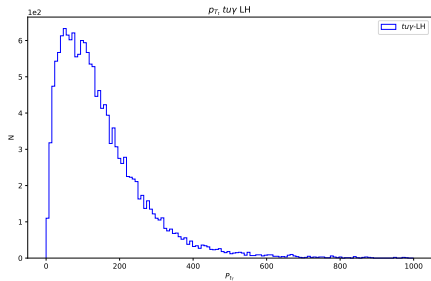
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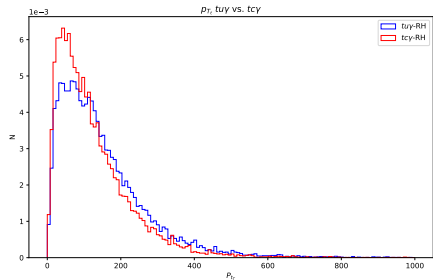
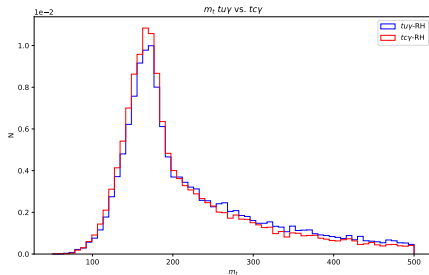
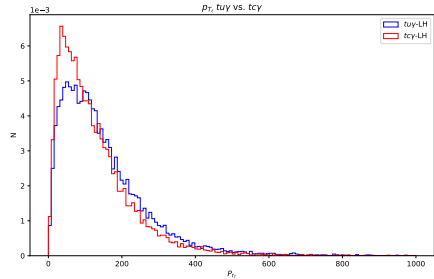
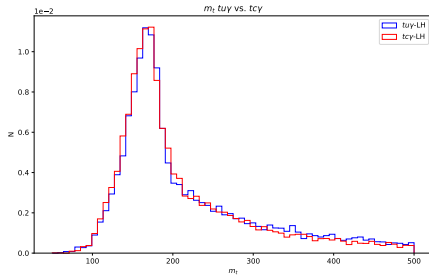
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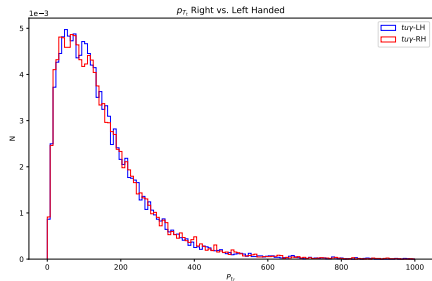
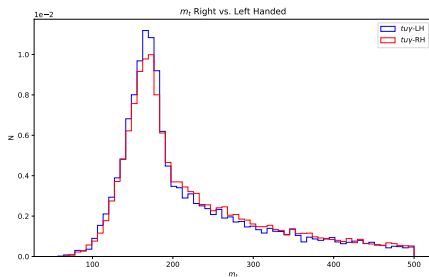
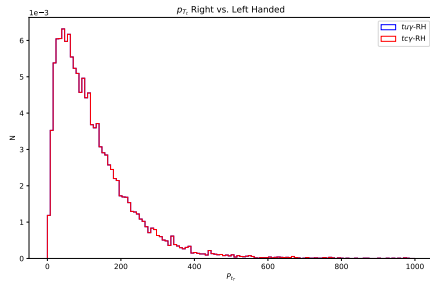
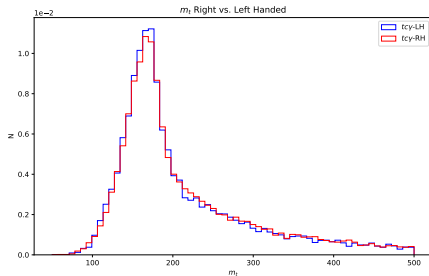
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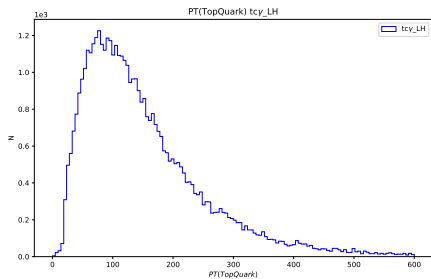
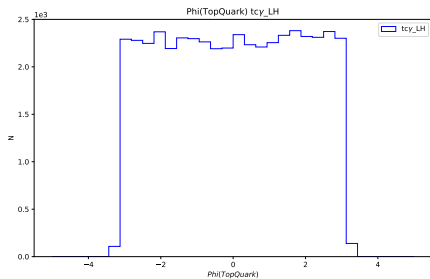
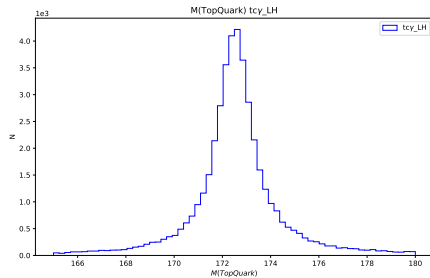
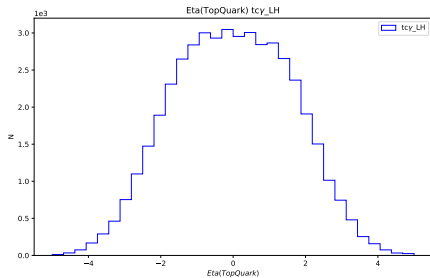
top tua vs tca



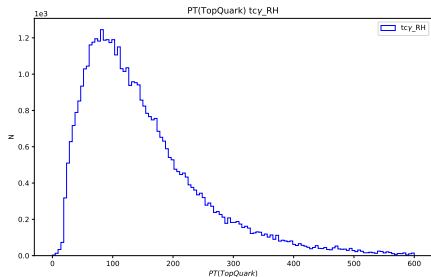
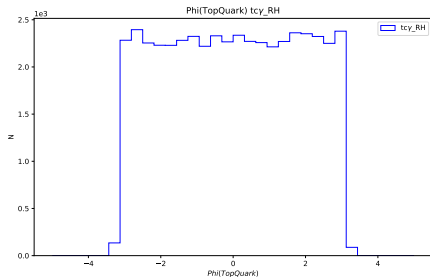
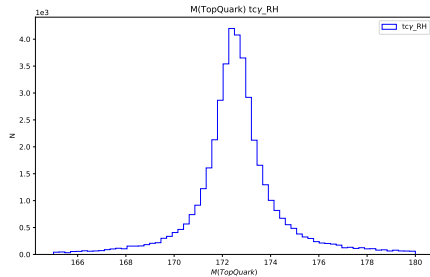
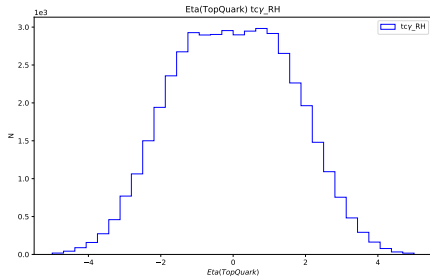
top LH vs RH



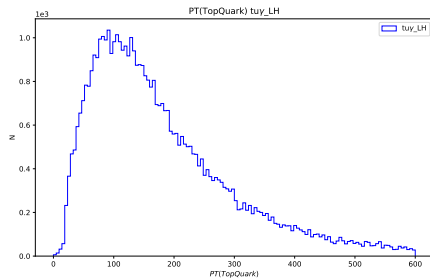
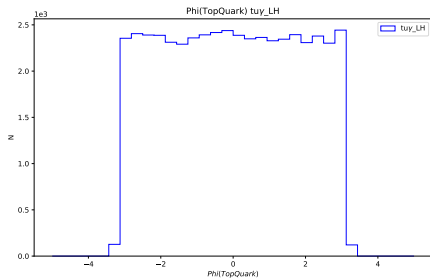
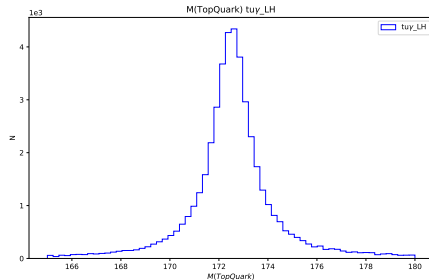
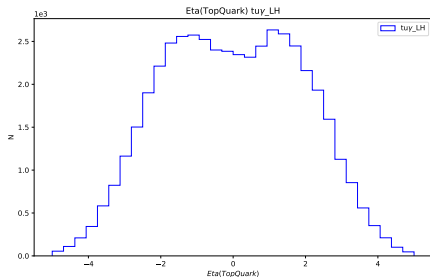
TopQuark_truth



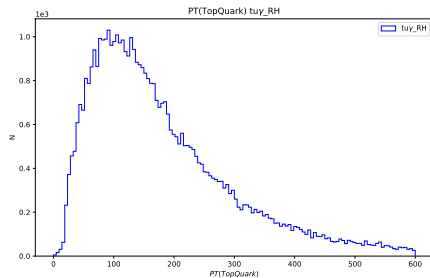
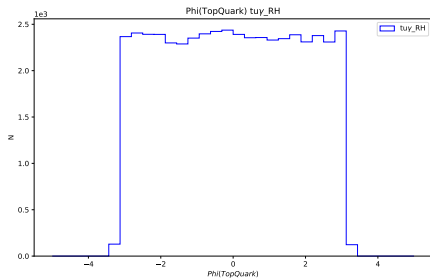
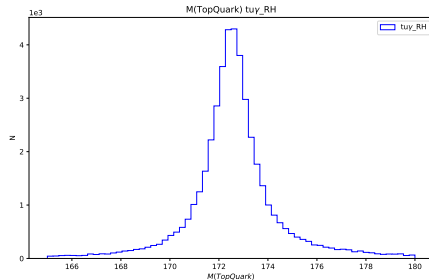
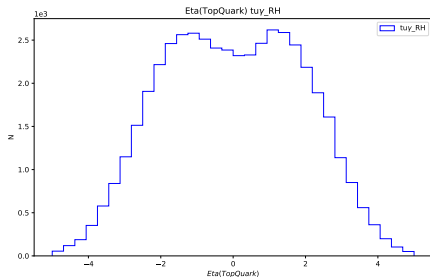
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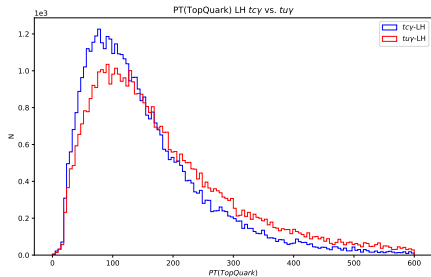
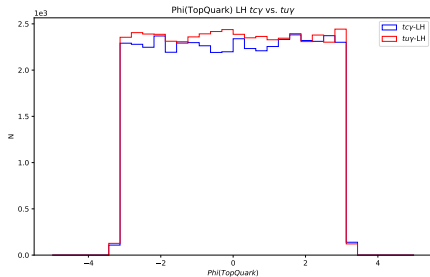
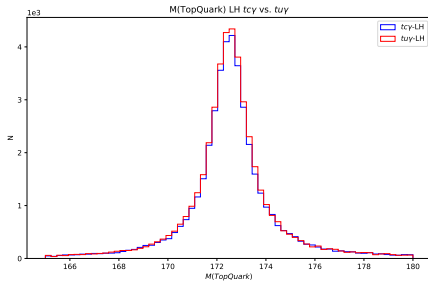
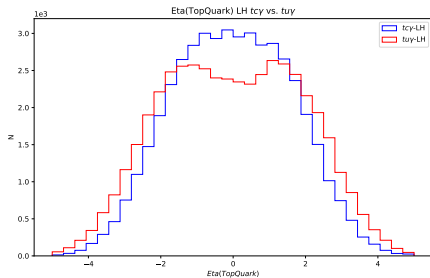
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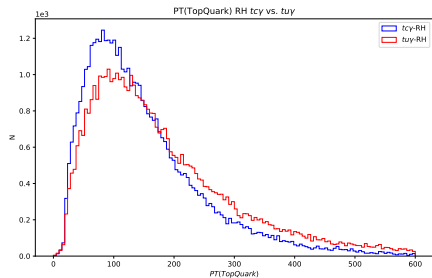
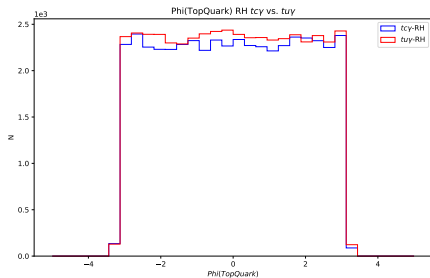
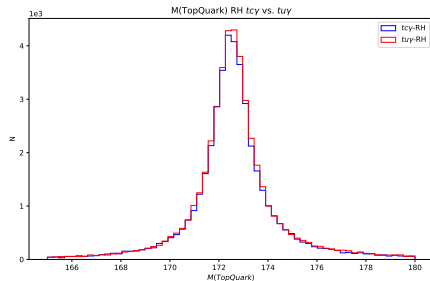
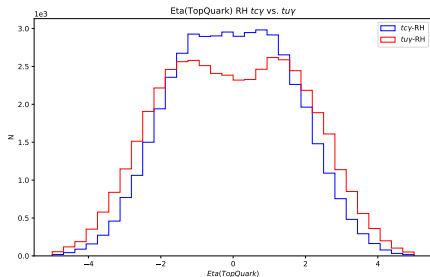
TopQuark_truth



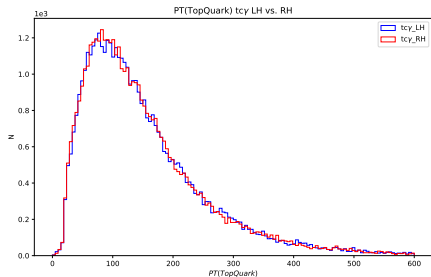
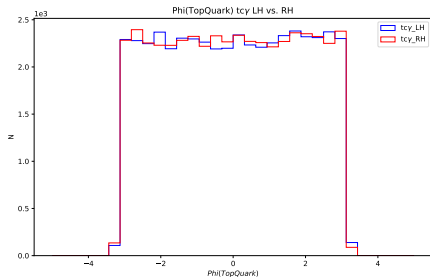
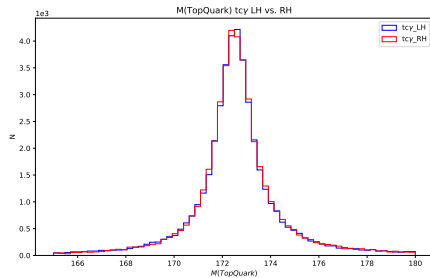
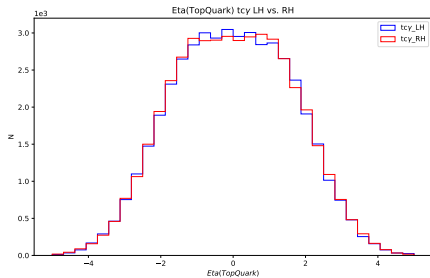
TopQuark_truth tua vs tca



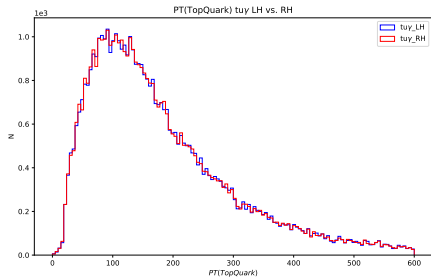
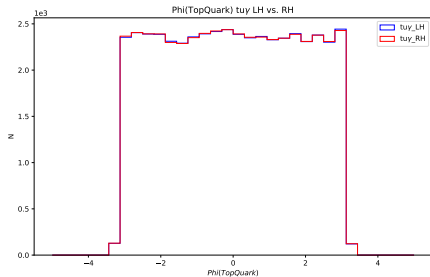
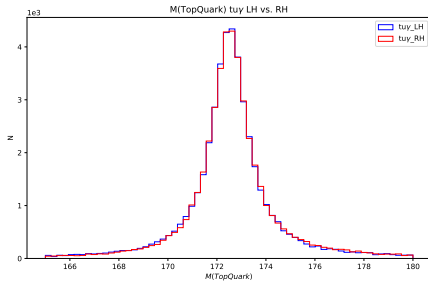
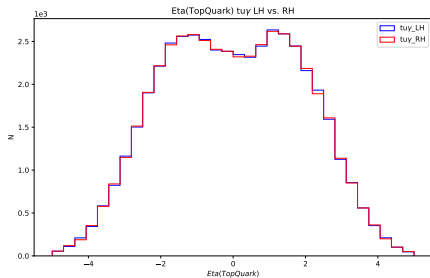
TopQuark_truth tua vs tca



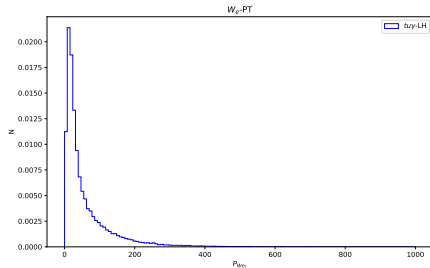
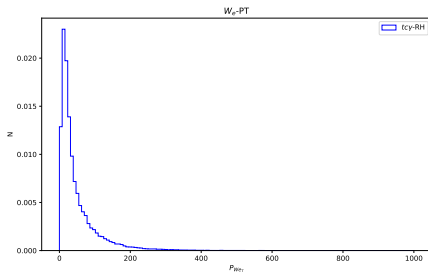
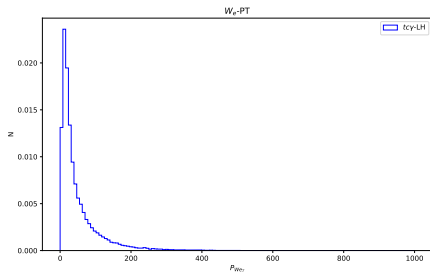
TopQuark_truth LH vs RH



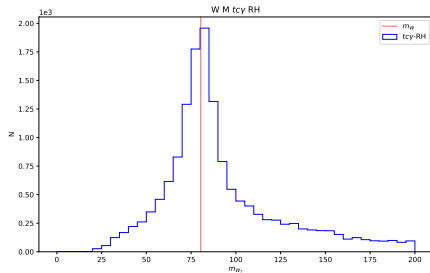
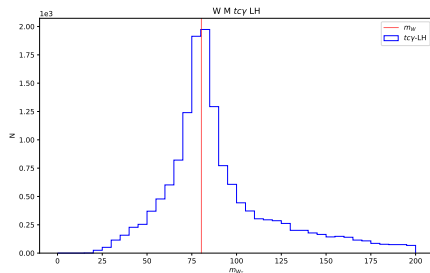
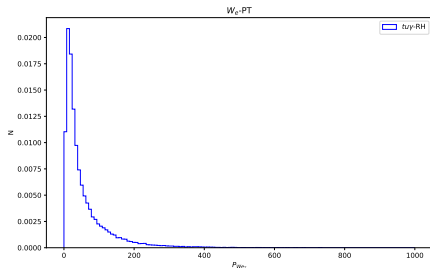
TopQuark_truth LH vs RH



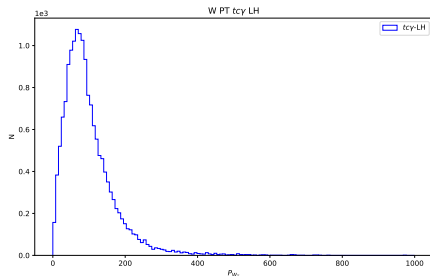
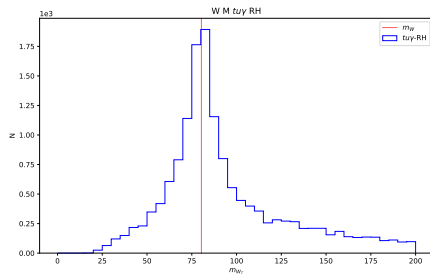
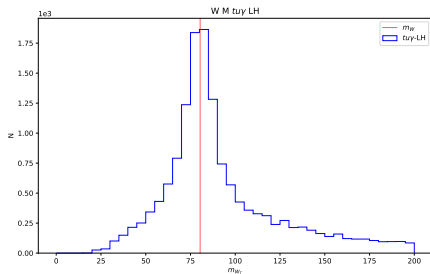
WBoson



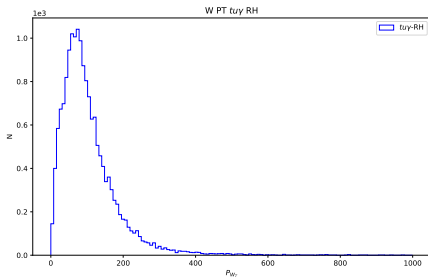
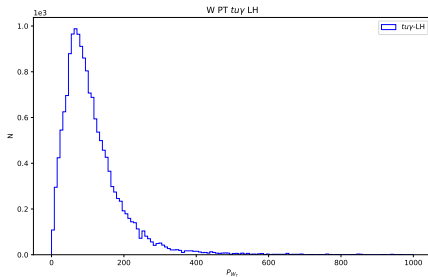
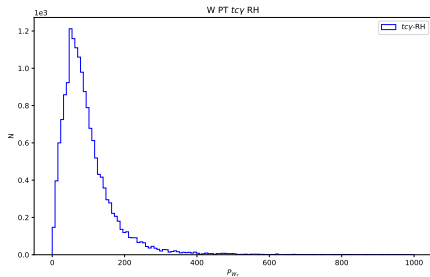
WBoson



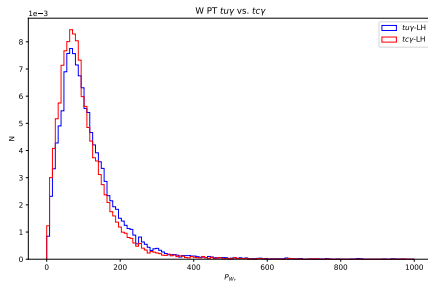
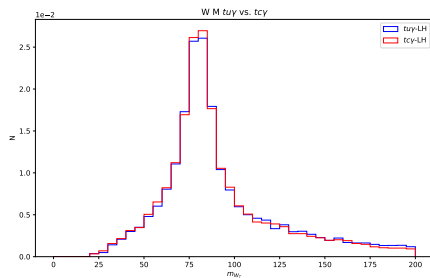
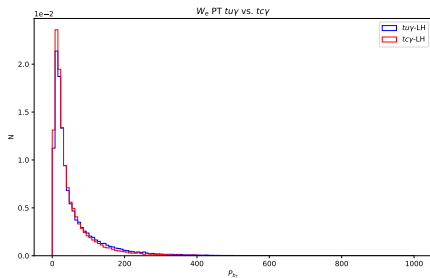
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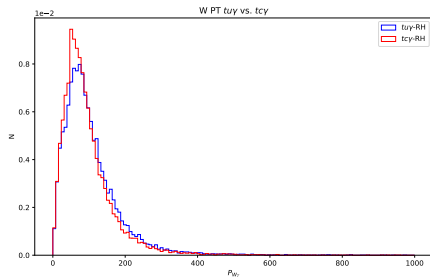
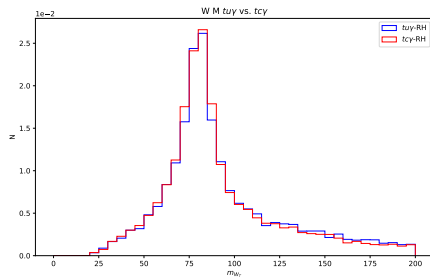
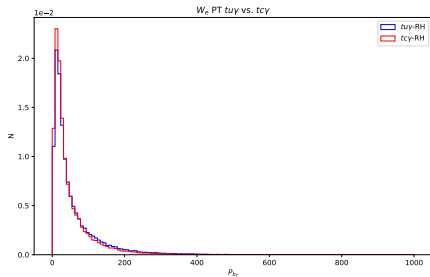
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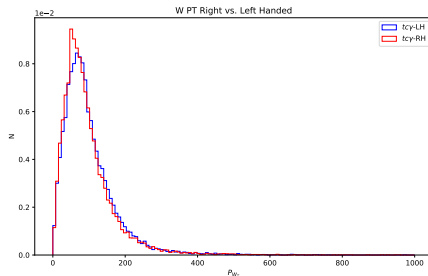
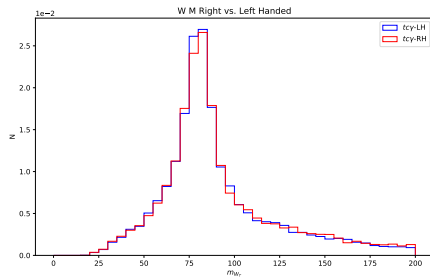
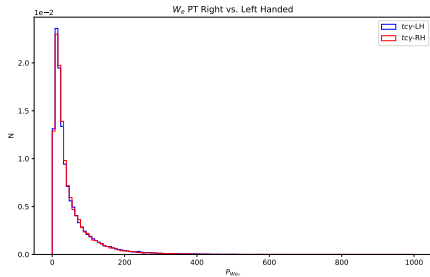
WBoson tua vs tca



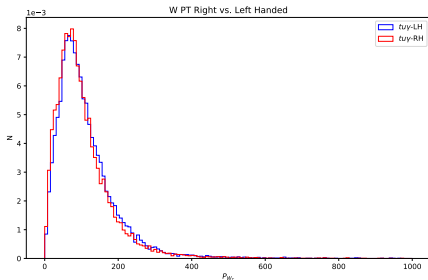
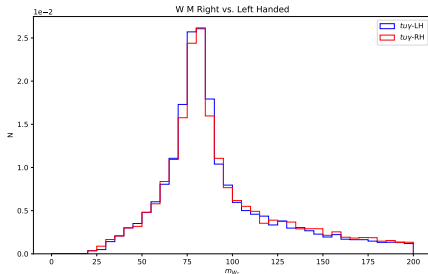
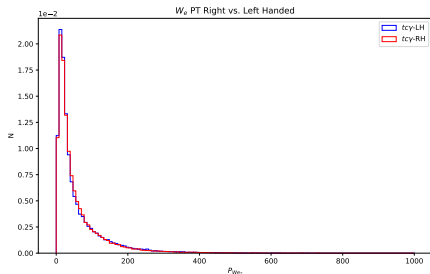
WBoson tua vs tca



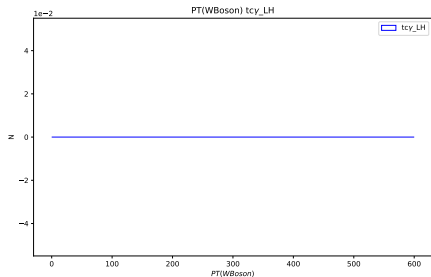
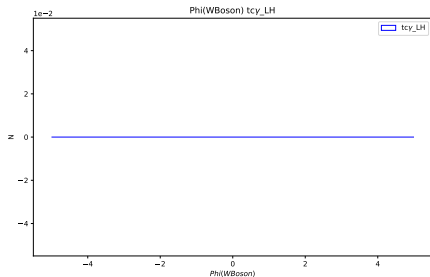
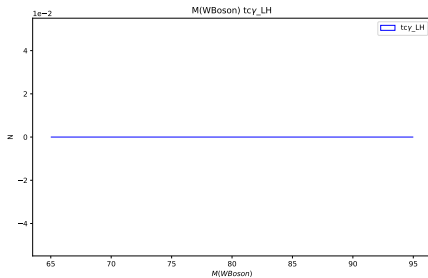
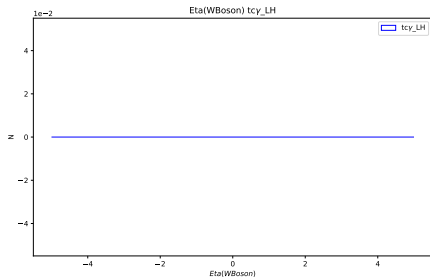
WBoson LH vs RH



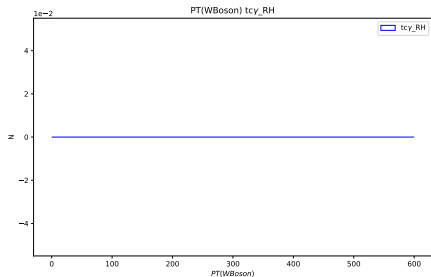
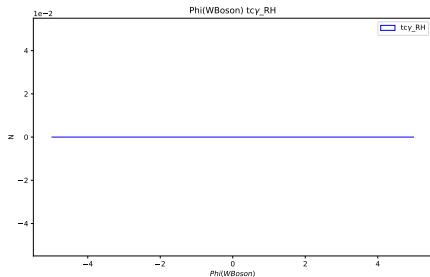
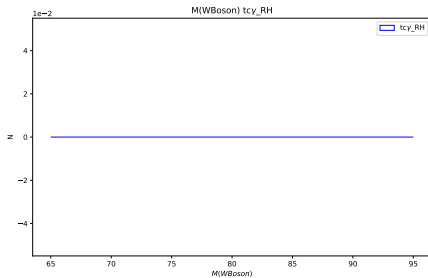
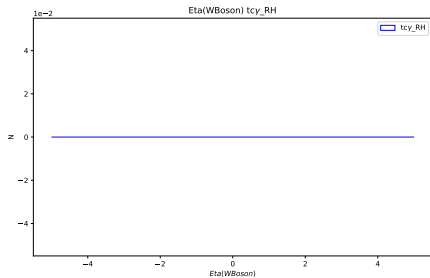
WBoson LH vs RH



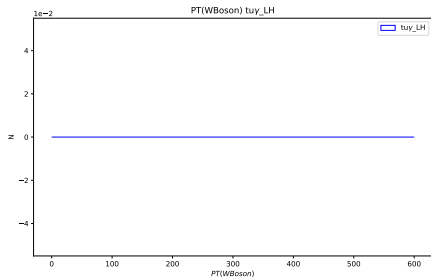
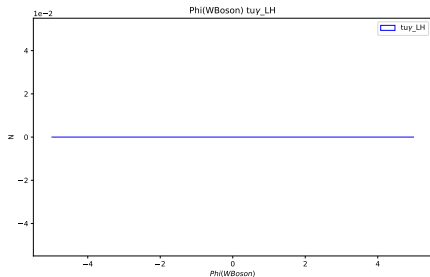
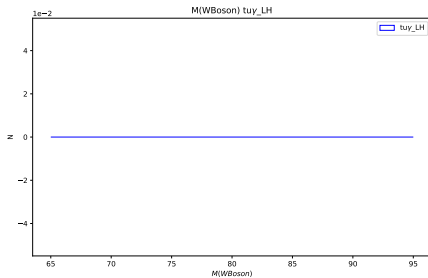
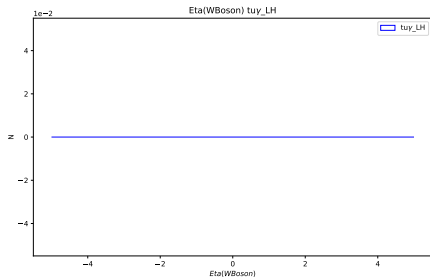
WBoson_truth



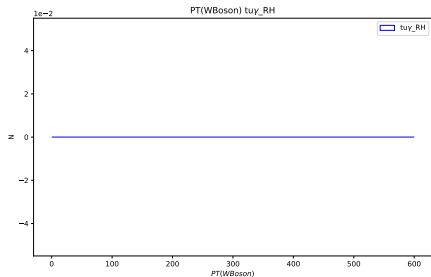
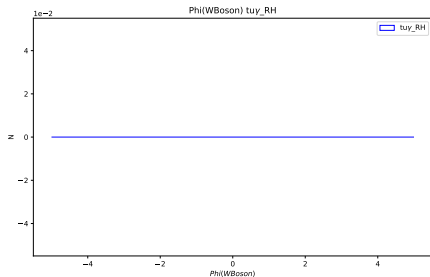
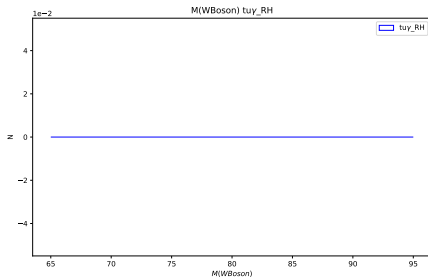
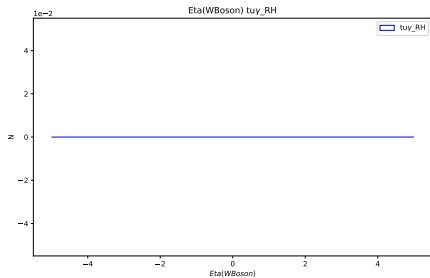
WBoson_truth



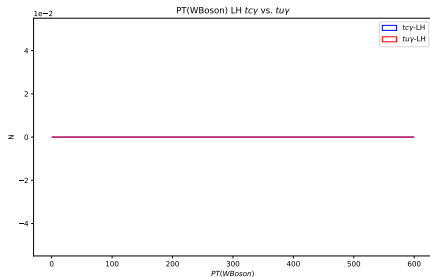
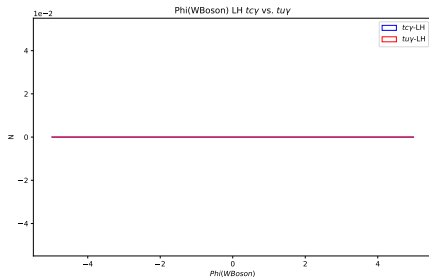
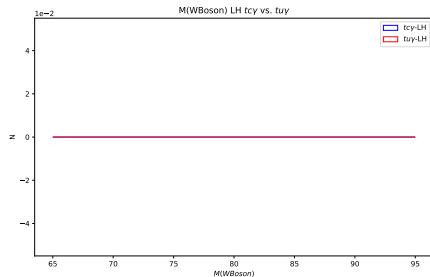
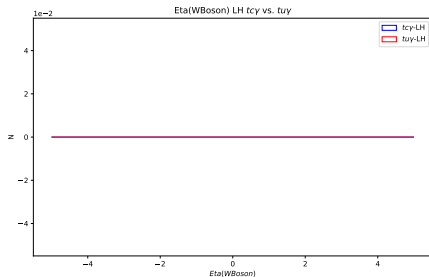
WBoson_truth



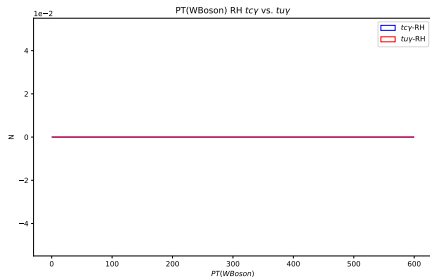
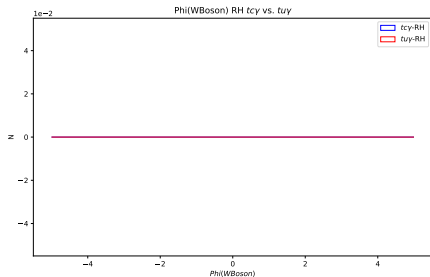
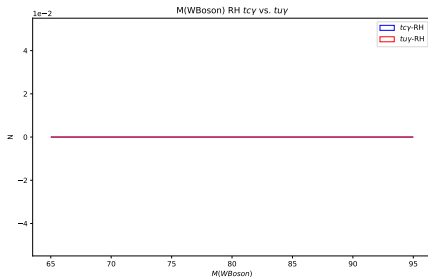
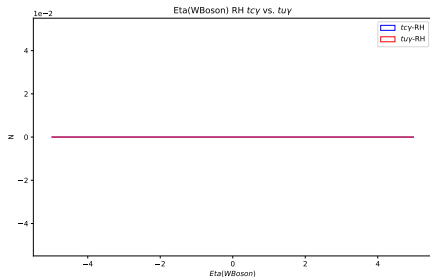
WBoson_truth



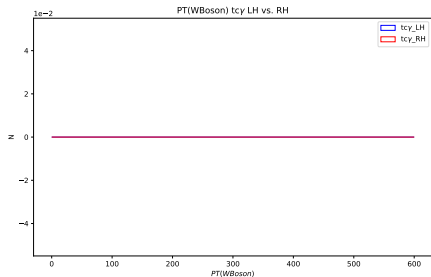
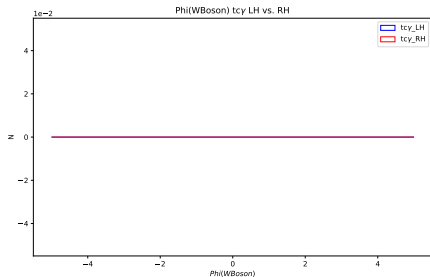
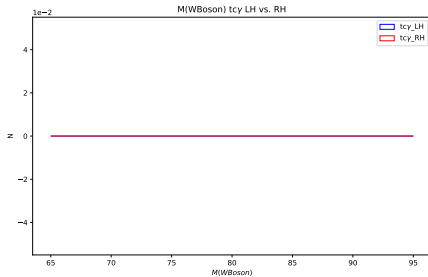
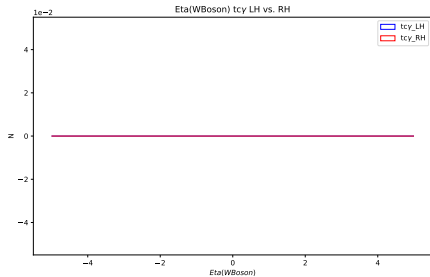
WBoson_truth tua vs tca



WBoson_truth tua vs tca



WBoson_truth LH vs RH



WBoson_truth LH vs RH

