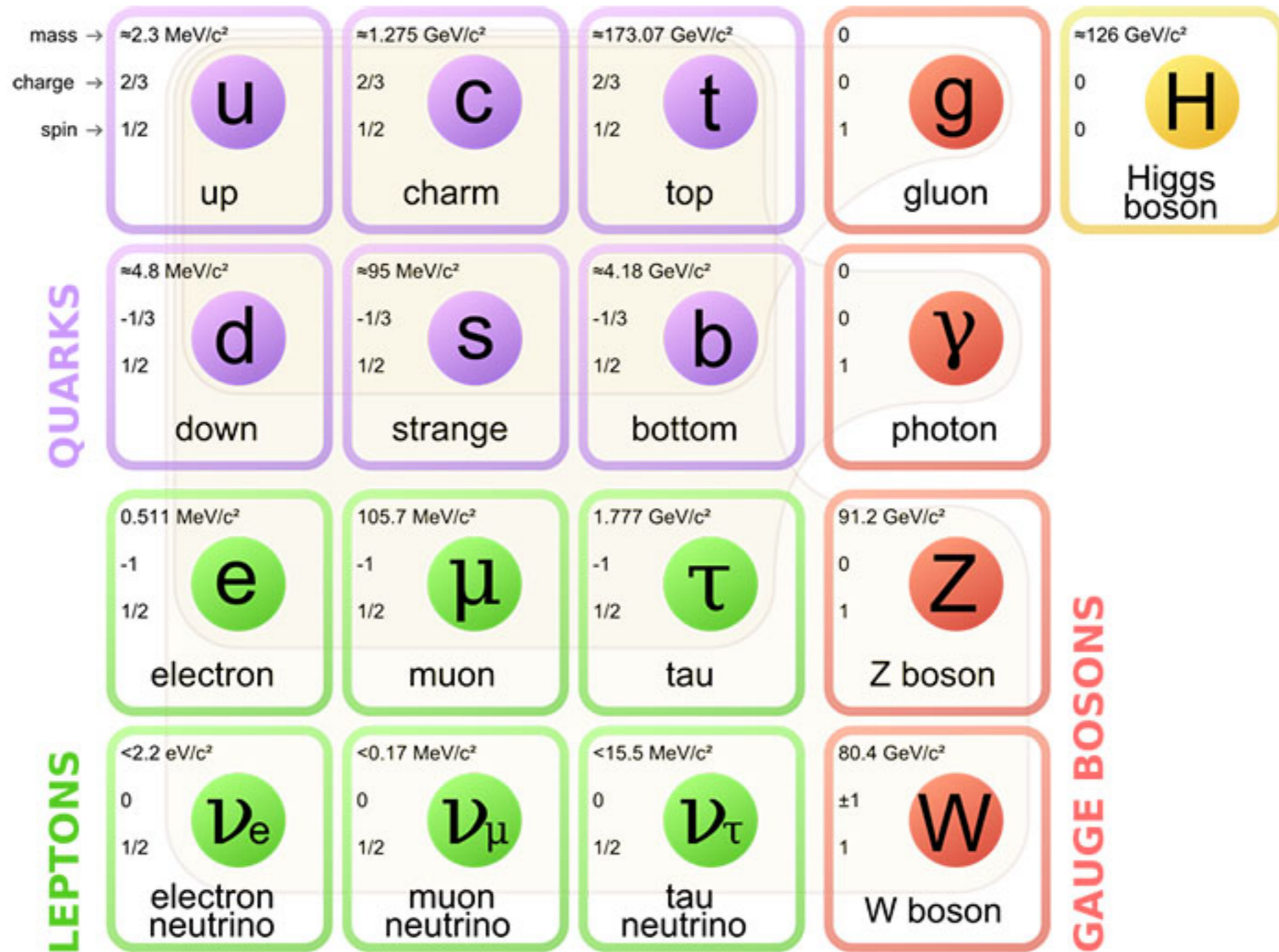


Study of the hipotetic particle T'

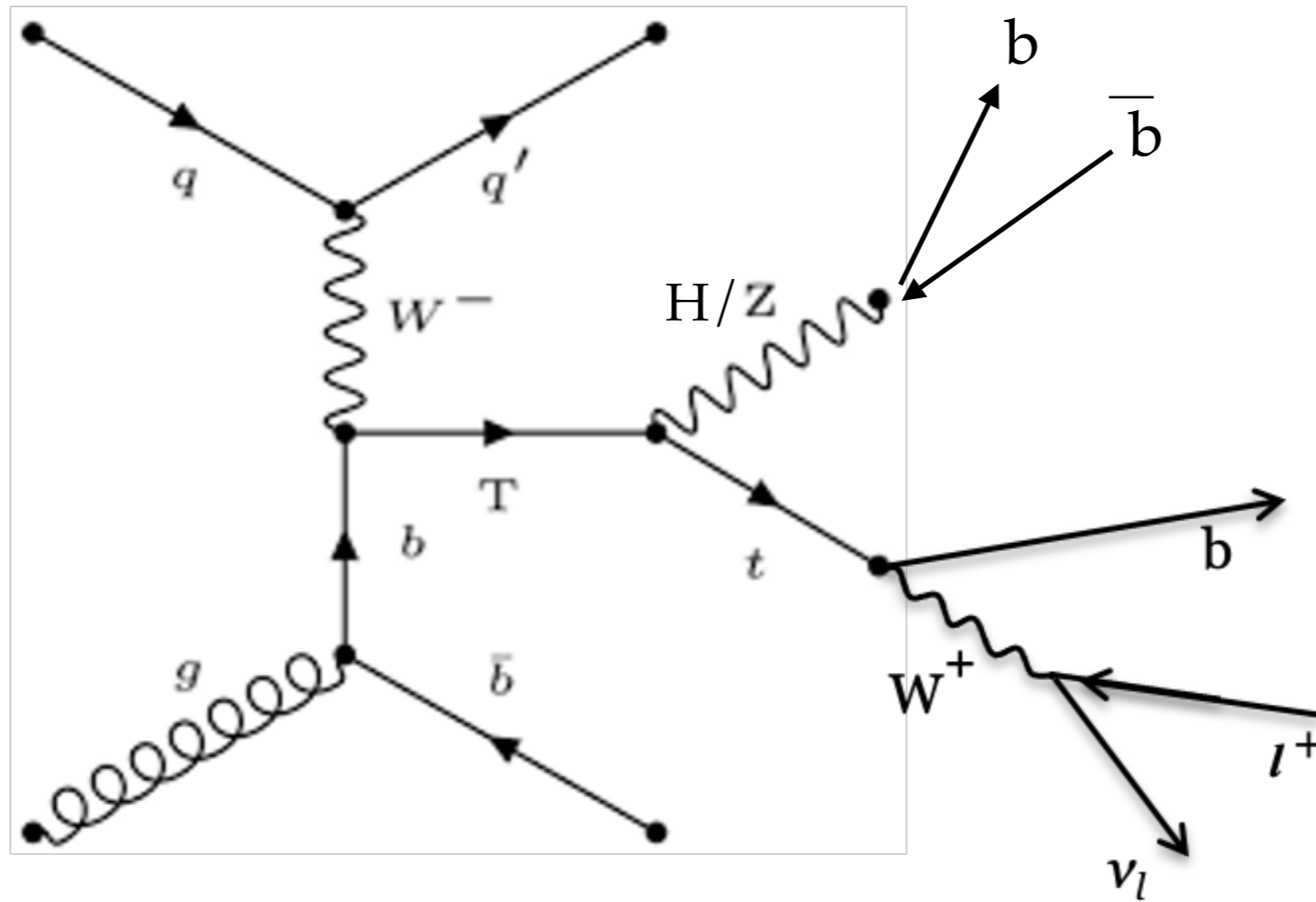
Quark top reconstruction

Alicia Gil Llidó

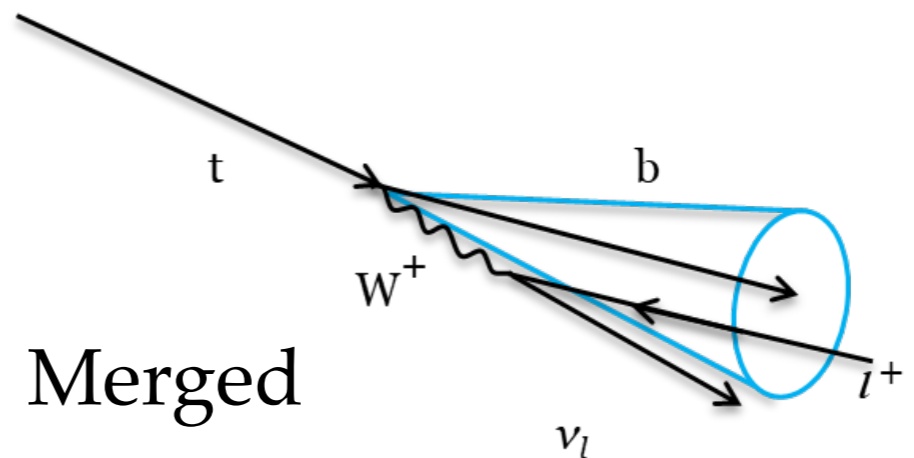
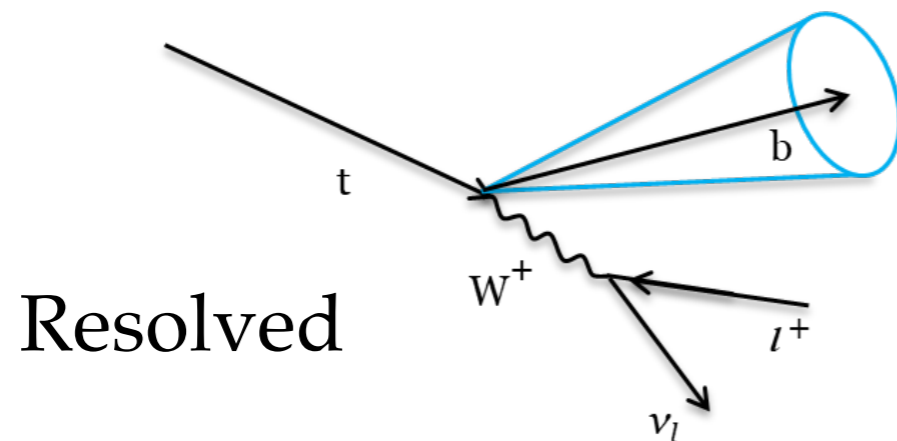
Standard model



Production and decay of T

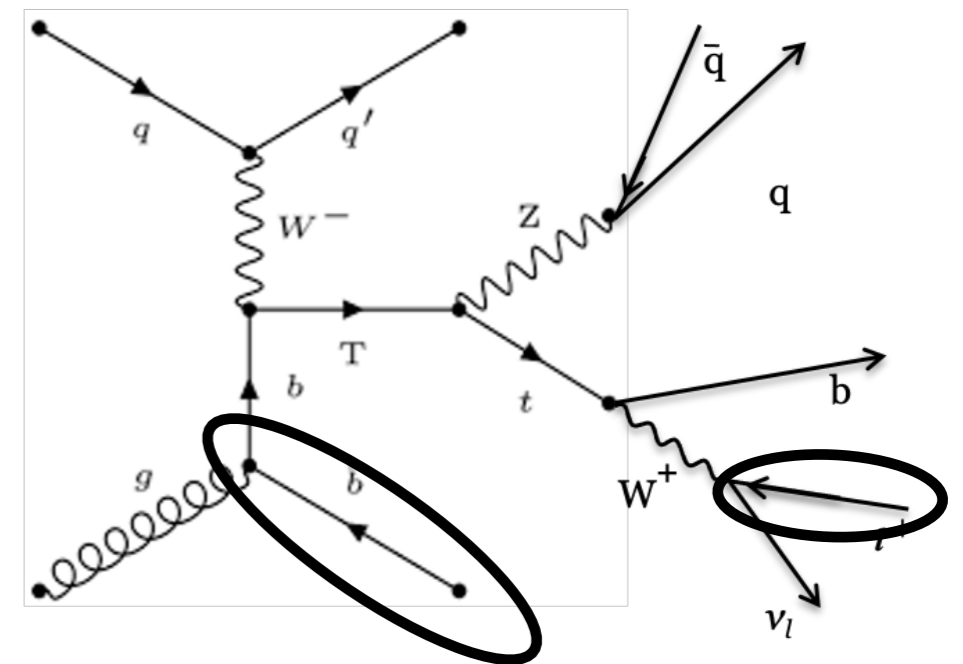
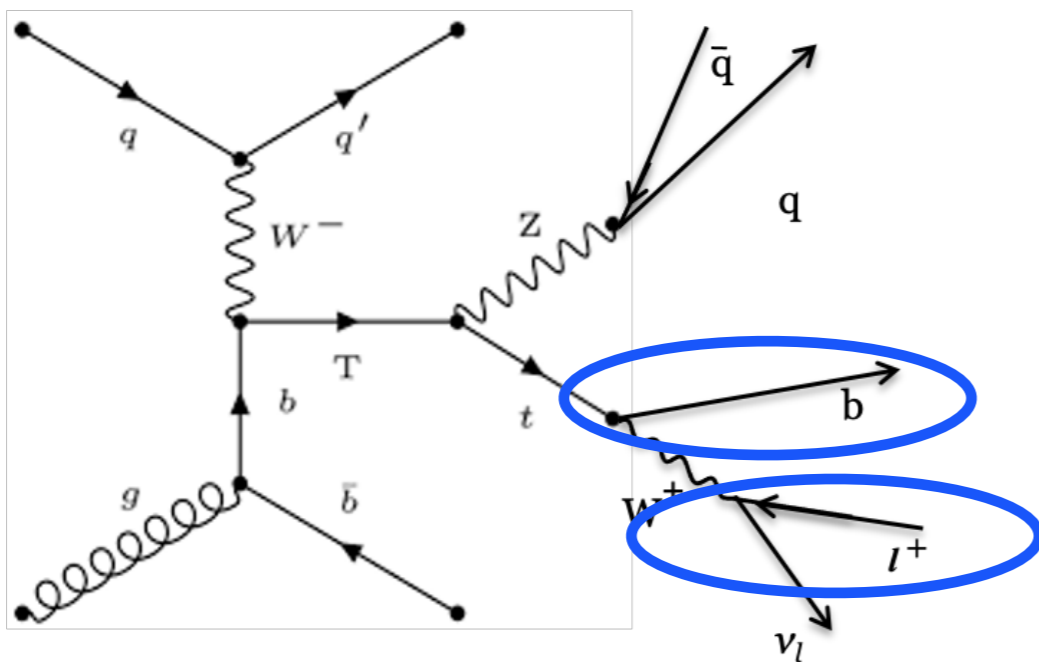
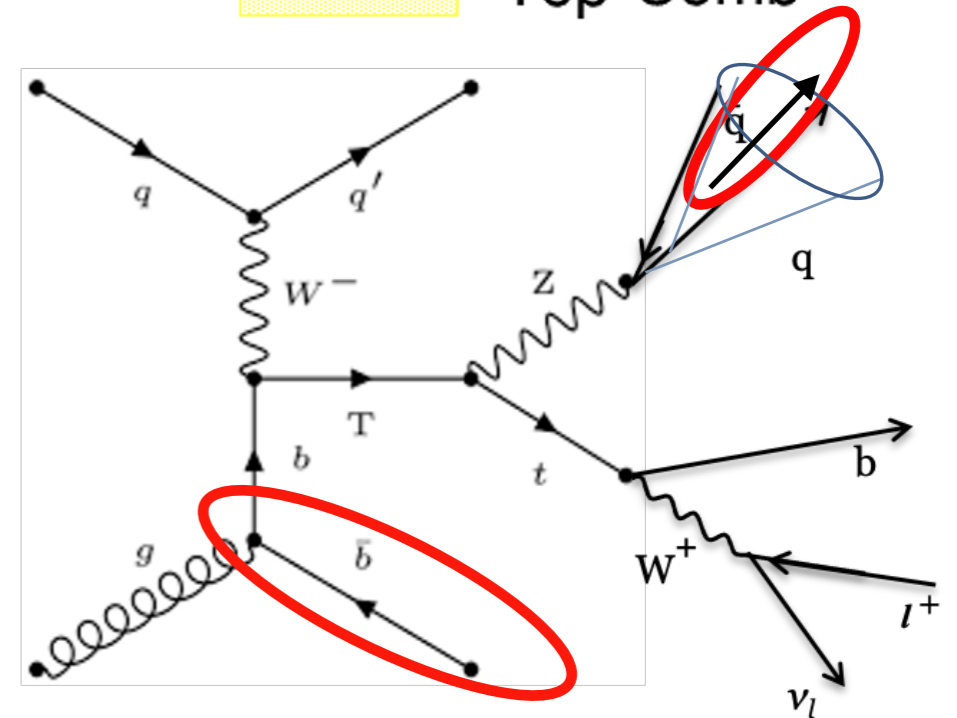
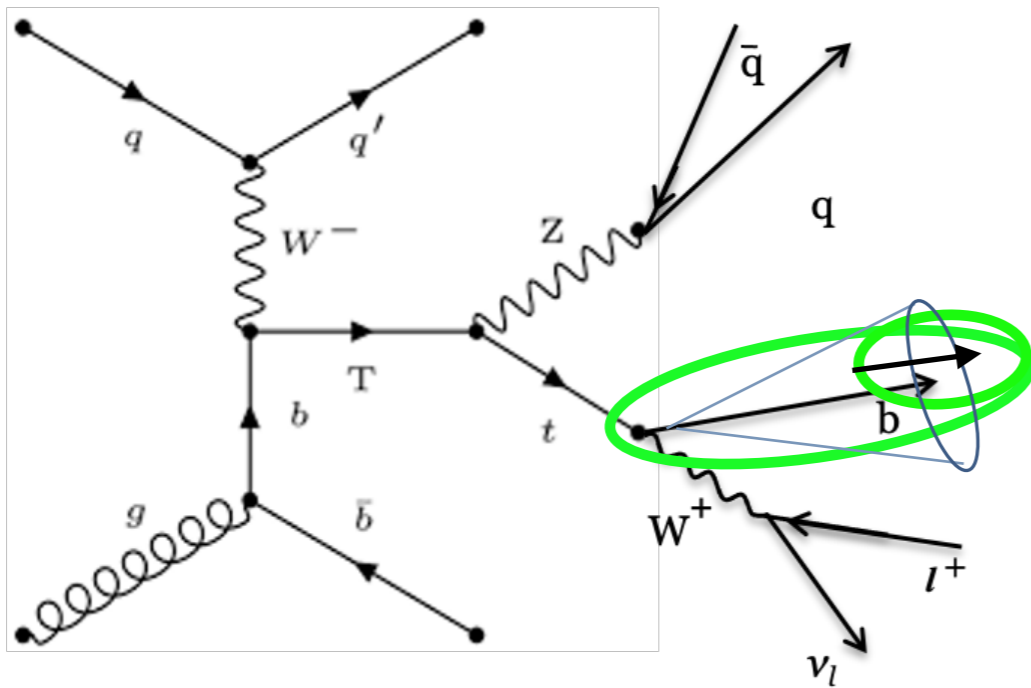


Top candidates:



Classification of events

-  Top True
-  Top False
-  Top Muon Match
-  Top Jet Match
-  Top Comb



Results

Initial data

Manual cuts

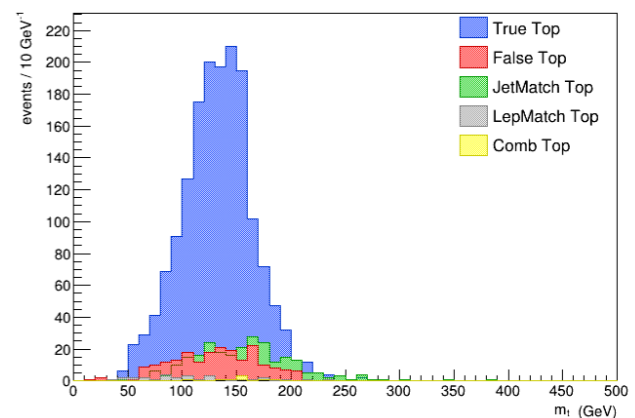
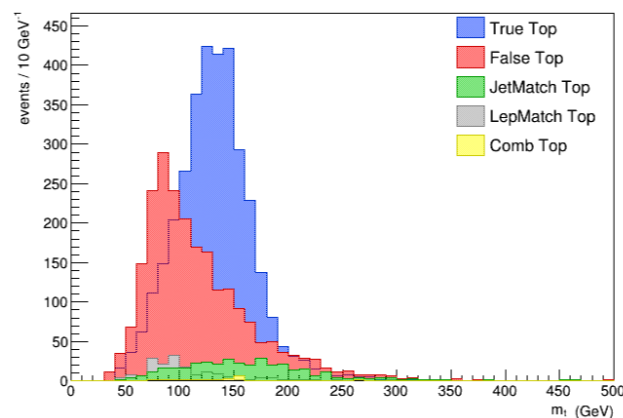
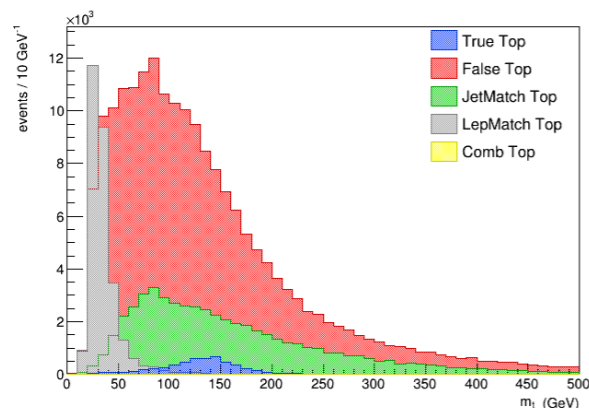
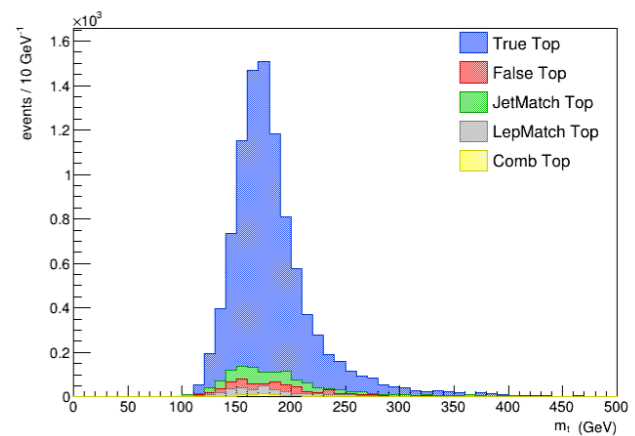
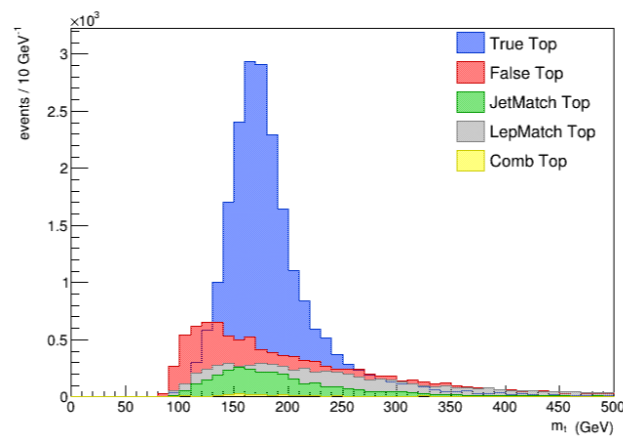
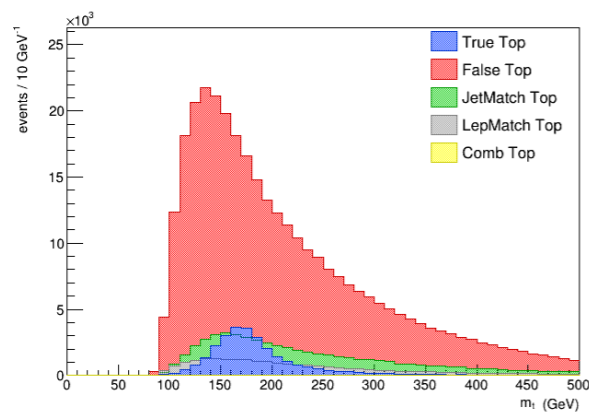
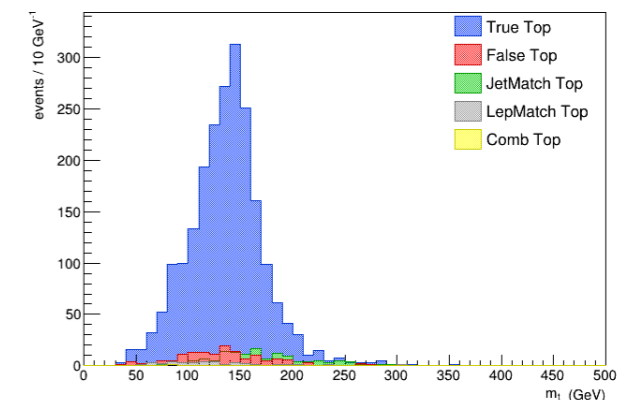
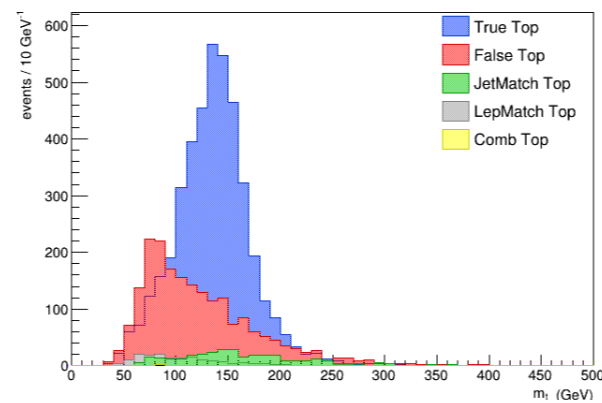
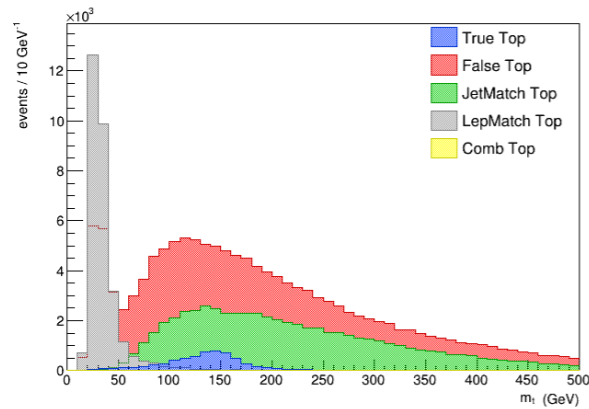
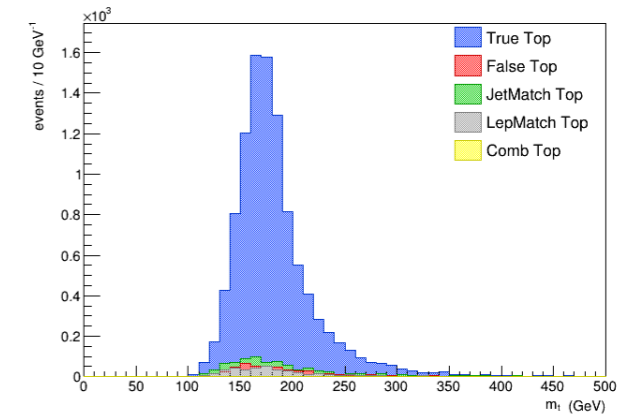
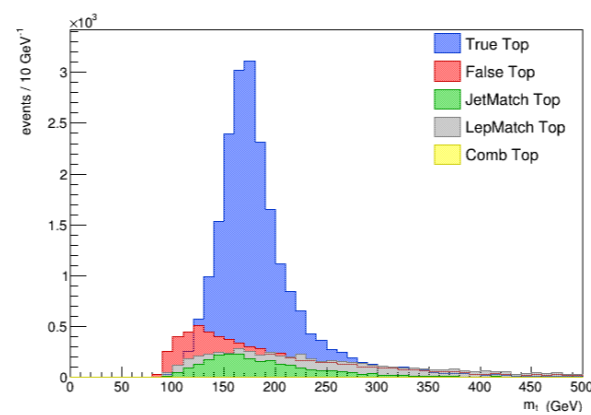
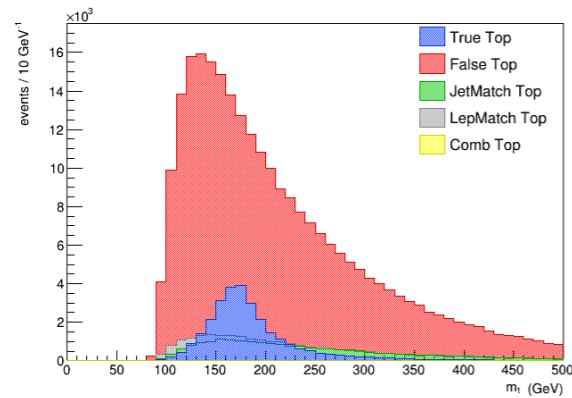
Machine learning cuts

μ resolved

μ merged

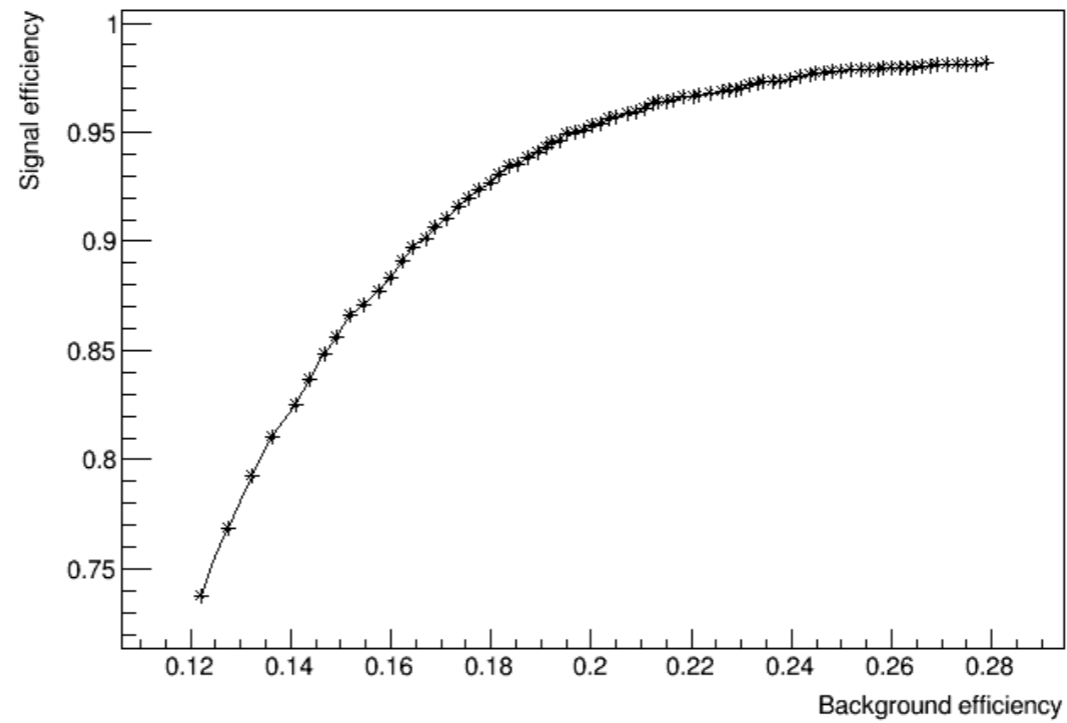
e resolved

e merged

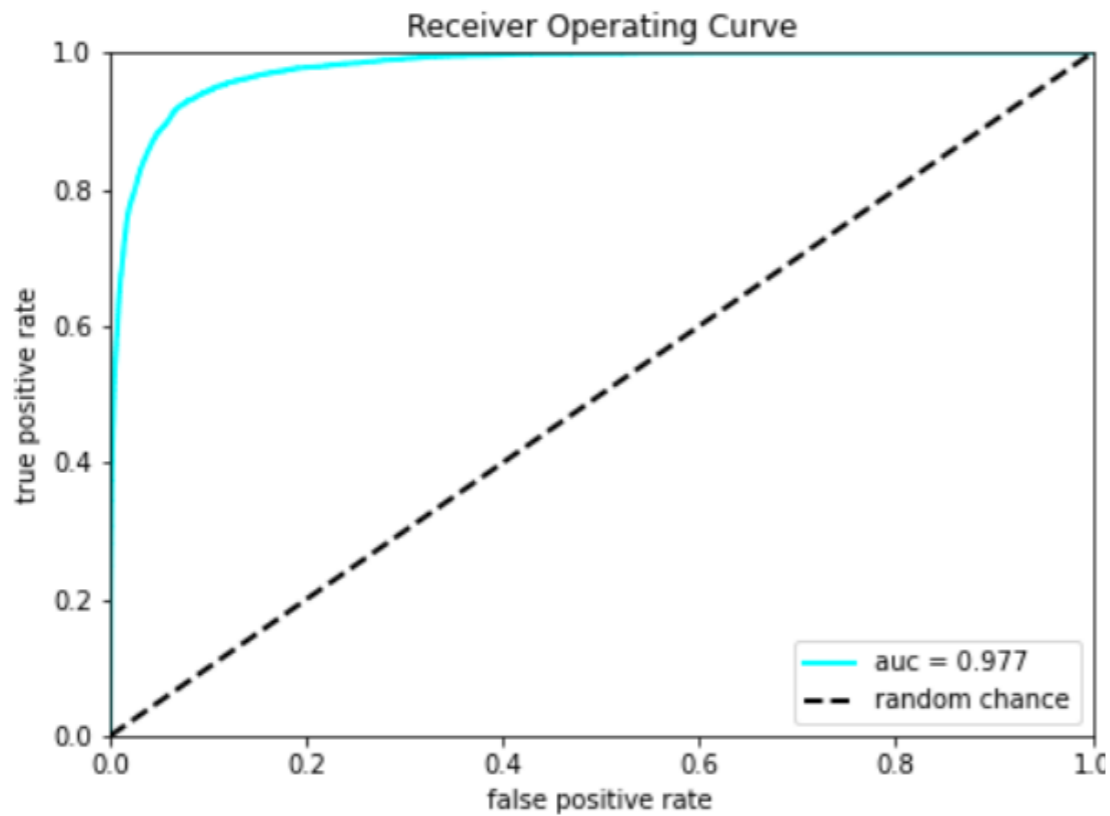


ROC μ Isolation($\Delta R_{\mu,j} > 0.4$)

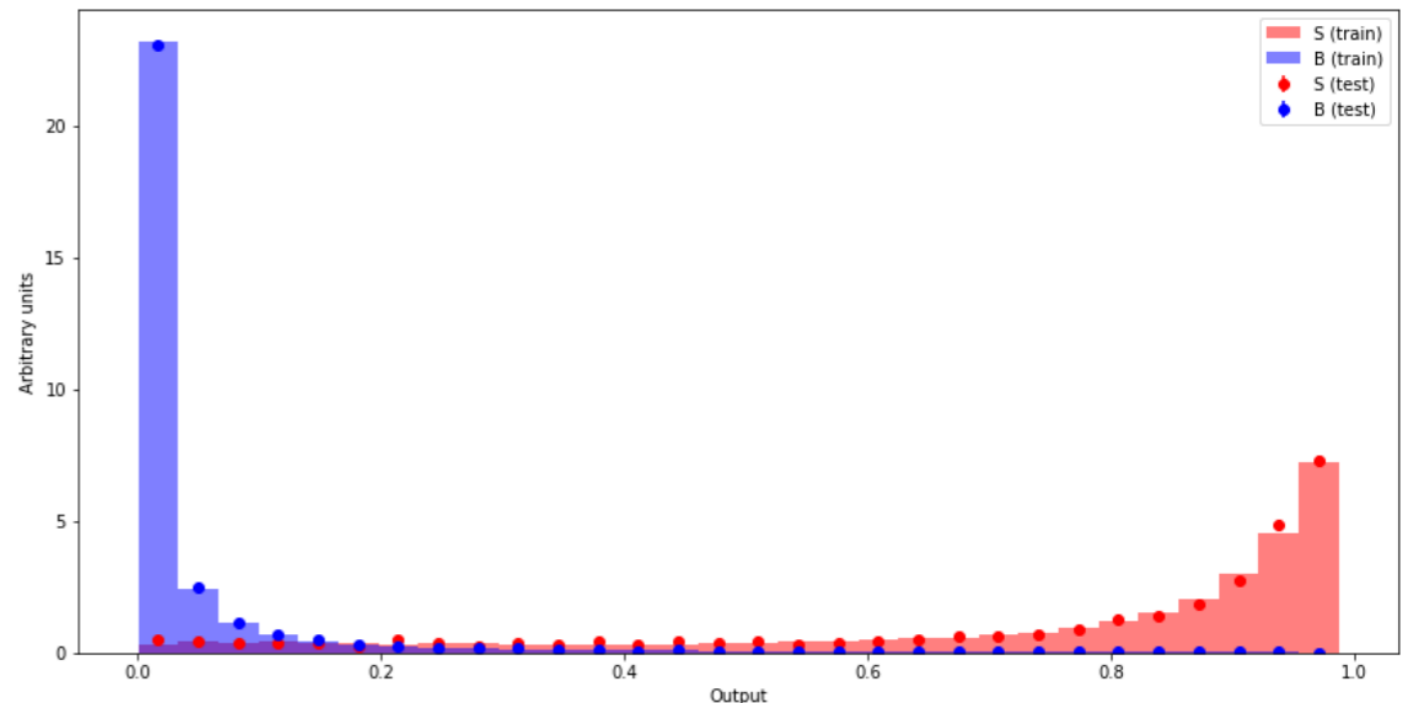
❖ Manual cut:



❖ Machine learning(BDT):



ROC



BDT score